



CFCM

CANADIAN FINISHING & COATINGS MANUFACTURING MAGAZINE

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September/October 2014



Quick Colour Change Systems in Powder Coating

When it comes to powder coating the demand is ever increasing to have a smooth, quick, simple colour change so very little, if any downtime, is experienced on the paint line. Manufacturers are answering that need with new technologies in quick colour change systems.

EXEL North America offers SAMES Easy Drive, an automatic powder application fast colour change booth system, which has been designed to provide 100 per cent coverage of the parts with minimal manual adjustments. It uses fixed automatic powder guns instead of using guns mounted on reciprocators. The system provides part detection, which will automatically move the fixed position guns in and out based on the size of the parts going into the booth for the best coating operation. The sensors will also trigger the guns at the correct times to allow for high first pass transfer efficiency.

Features:

- Portable booth allows for a quick color change

continued on page 21

ALSO IN THIS ISSUE

- Flame Retardants
- Recycling in Ontario
- Anti-graffiti Agents
- Fillers
- Flatline Finishing Systems
- Pretreatment and Washing
- Power Supplies and Rectifiers
- Anodizing trends

MUCH MORE!

Waterborne Wood Finish and Stain Systems

Wood Finish and Stain manufacturers and been very busy in research and development to meet the demand for waterborne products that have the same or better results than the traditional products. They have succeeded with several new product launches promising to answer the market's needs.

Sherwin-Williams Product Finishes has announced AcromaPro as the new name of its industrial wood finishing brand available exclusively through its North American distributor network. The line of coatings for the furniture, kitchen and bath, millwork and specialty markets carries on the 140-year Becker Acroma tradition.

"While the brand name has changed, the formulas for and outstanding quality of AcromaPro products remain the same," says Mike McCally, Director of Strategic Sales. "AcromaPro products are designed to exceed wood finishers' expect-

tations, and we promise to continue to deliver the latest innovations to enhance product performance – just as we've done with products like Matador and Bernyl."

Proven European-inspired technology addresses woodworkers' finishing needs through a full range of coatings, including industry-leading waterborne solutions, a dedication to offering a full range of UV coatings and unique lacquers and varnishes. AcromaPro is sold through a network of authorized coatings distributors across the US and Canada.

www.acromapro.com

Sherwin-Williams Product Finishes has recently launched two new waterborne systems.

Sher-Wood SB Stain System, a family of spray and wipe stains, offers fast, repeatable color matching for batch-to-batch consistency with tight tolerances.

An enhanced anti-settling feature boosts the stain's stability and color dispersion and increases its workability.

continued on page 20

In the News

Association News

Canadian Coatings Industry to Honour Individuals at Annual Conference

The Canadian Paint and Coatings Association (CPCA) will honour three individuals for their distinguished contributions to the association and the paint and coatings industry in Canada. These awards will be presented at the upcoming annual conference in Quebec City on October 5-7, 2014.

"We are pleased to once again recognize three deserving individuals who have made important contributions to their companies and the important work done on behalf of the association throughout their careers," says Dale Constantinoff, CPCA's Board Chair.

Terry Sutherland of PPG Industries Canada will be presented with the Industry Achievement Award. This award is presented to an individual or organization that has demonstrated exceptional achievement in advancing the interests of the industry and the association. Mr. Sutherland is being honoured for his long-standing dedication and invaluable contributions to CPCA's Health, Safety and

continued on page 5

FABTECH 2014

Finishing's Largest Trade Show & Conference

FABTECH heads to Atlanta, GA November 11-13, 2014 bringing together an anticipated 27,000 attendees and 1,400 exhibiting companies all under one roof. The show provides a backdrop for visitors to experience live equipment demonstration, find cost savings solutions, and network with industry peers throughout the 500,000+ square feet of show floor.

CCAI's FINISHING Pavilion at FABTECH is the finishing industry's largest trade show and conference dedicated to all finishing technologies. As a partner in North America's largest metal forming, fabricating, welding and finishing event, CCAI is proud to be a part of bringing all manufacturing technologies together at FABTECH each November. It is now the destination show and conference for all those involved in the FINISHING industry. We will have more exhibitors showcasing more products and technologies than anywhere else!



Exhibitors (as of 08/05/2014)

ACT Test Panels, LLC*
AFC Finishing Systems
Air Power, Inc.
Akzo Nobel Powder Coatings*
Alabama Washer & Oven Company, Inc.
American Finishing Resources*
Amiberica, Inc.
Anest Iwata USA
Apel International Inc.
Argon Masking Corp.
Arkema Inc.
Armology of Western PA, Inc.
Asia Machine Group
Axalta Coating Systems*
Baril Coatings USA
BASF Corp.
Bayco / Guspro Inc.
Becca Inc.
BEX Spray Nozzles
Blastman Robotics Ltd.
Bulk Chemicals, Inc.
BYK-Gardner USA
Calvary Industries Inc.*
Canadian Finishing & Coatings Manufacturing
Caplugs / Shercon
Catalytic Industrial Systems
Chameleon Innovations
Chemetall*
Chemical Coaters Association International
Clean Air Consultants/ Filter 1
Clean Air Technology Solutions, LLC
Clemco Industries Corp.
Cogistix LLC
Cold Shot Chillers
Col-Met Spray Booths*
Combustion and Systems, Inc.
Conforming Matrix Corp.
Coral Chemical Co.*
Custom Fabricating & Supplies
Daifuku Webb
Decoral System USA Corp.
DeFelsko Corporation
Dinamec Systems
DuBois Chemicals*
DuPont Teflon Industrial Coatings
Duroair Technologies Inc.
Dynabrade Inc.
Echo Engineering & Production Supplies, Inc.*
Eisenmann Corp.*
Elcometer Inc.
The Electrocoat Association
Electro-Steam Generator Corp.
ElektroPhysik USA Inc.
Empowering Technologies - SONATS
EMSL Analytical, Inc.
Enhancement Technologies / Sublitex-Miroglio*
EPSI*
EXEL North America*
FAMIS Inc.*
FARO Technologies
Filter Doc Corp.
Finishing Brands*
Fischer Technology Inc.
Fostoria Process Equipment, div. of TPI Corp.*
Freedom Scientific Industrial Inspection
FROHN North America, Inc.
Paul N.Gardner Co., Inc.
Garmat USA
Gema
General Automatic Transfer Co.
General Fabrications Corp.
Global Finishing Solutions LLC*
Goff, Inc.
Graco Inc.
Henkel Corp.*
Hentzen Coatings Inc.*
Herr Industrial, Inc.
Houghton International - Metal Finishing
Hubbard-Hall Inc.
IFS Coatings, Inc.
IHI Ionbond Inc.
Infracol Manufacturing Corp.
Intech Services*
IntelliFinishing*
Intertek
IST International Surface Technologies
Johnson Thermal Systems Inc.
Keyland Polymer Ltd.
KMI Systems Inc.*
GeorgeKoch Sons, LLC*
Kolene Corporation*
LDPI, Inc.
Lee Yeong Industrial Co., Ltd.
Liaoning Longyuan Industry Co., Ltd.
LPI, Inc.
LPR Global, Inc.
LS Industries, Inc.
Magic Rack/Production Plus Corp.*
Metcast Blast Cleaning Technologies
MetoKote Corp.
Midwest Finishing Systems, Inc.*
Mighty Hook Inc.*
MPC Plating, Inc.
Munters Corp.
NikoTrack
Nordson Corp.*
Osborn
Parker Ionics
Patriot Powder Coatings
PERO Corp.
Pneu-Mech Systems Mfg. LLC*
Pollution Control Products Co.
Porcelain Enamel Institute, Inc.
Powder Coating
Powder Parts, Inc.
Powderdepot.com
Powder-X Coating Systems, Inc.
PPG Industries, Inc.
Precious Plate Inc.
Precision Quincy Ovens LLC
Pretreatment Equipment Manufacturing Inc.*
Production Systems, Inc.
Products Finishing Magazine*
Protech Powder Coatings
R.S. Hughes
RAMPF Group Inc.
Rapid Engineering LLC*
Reliant Finishing Systems
Rhodes Systems International, Inc.
Richards-Wilcox, Inc.*
Riveer
Rohner
Sata Spray Equipment
Selas Heat Technology / Red-Ray Infrared
Sheboygan Paint Company
The Sherwin-Williams Co.*
sia Abrasives
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Sponge-Jet, Inc.
Spray Systems, Inc.
Spray-Tech / Junair
Superfici America Inc.
System Technologies, Inc.
Tanis Inc.
TCI Powder Coatings
Tennessee Galvanizing
Therma-Tron-X, Inc.*
Tiger Drylac Canada Inc.
Transmet Corporation
Trimac Industrial Systems, LLC
Uni-Spray Systems Inc.
Valmont Coatings
Vitraccoat America Inc.
Vulcan - Heraeus*
Vulkan Blast Shot Technology
Wagner Industrial Solutions*
Walther Pilot North America*
Webb-Stiles Company*
Western Abrasives

*CCAI Corporate Members

November 11 - 13, 2014 ♦ Atlanta, GA USA

Finishing's Most Comprehensive Conference

FABTECH also provides learning opportunities beyond the exhibits with over 100 educational sessions and expert-led presentations on the latest industry trends and technology in the metal forming, fabricating, welding and finishing industries.

CCAI is proud to announce 46 hours of FINISHING education at FABTECH 2014, including more than a dozen new sessions. For full descriptions, visit www.fabtechexpo.com/learn.

TUESDAY, NOVEMBER 11

8:00 a.m. - 10:00 a.m.

C10: BUILDING BLOCKS OF A POWDER COATING SYSTEM

C11: THE BASICS OF ELECTROCOATING

- Understanding Electrocoat Materials
- Electrocoat Equipment

C12: CONCEPTOS BÁSICOS DE PINTURA EN POLVO EN ESPAÑOL

10:30 a.m. - 12:30 p.m.

C20: NEW! IT'S MORE THAN JUST BUYING A GUN

- Transfer Efficiency for Powder Coating Guns
- Functionality of Hoppers and Powder Pumps

C21: ADVANCES IN PORCELAIN ENAMEL

C22: NEW! SYSTEM DESIGN, INSTALLATION AND OPERATING TIPS

- System Design and Installation Tips
- System Operating Tips

1:30 p.m. - 3:30 p.m.

C30: EMERGING TECHNOLOGIES

**This session is FREE for anyone who registers for another finishing session.*

WEDNESDAY, NOVEMBER 12

8:00 a.m. - 10:00 a.m.

C40: NEW! SAFETY AND REGULATORY GUIDELINES FOR POWDER COATING

- Safety and Regulatory Guidelines Overview
- Safety and Regulatory Guidelines for Curing Ovens
- How to Prepare Your Company for an Audit by State and Federal Environmental Agencies

C41: NEW! ADVANCES IN PRETREATMENT TECHNOLOGY

- Non-Phosphate Paint Pretreatments — Still Sitting on the Fence?
- Zirconium Pretreatment Options
- Iron and Zinc Phosphates vs. Zirconium Pretreatments
- Pretreatments: Dry-in-Place vs. Phosphates and Zirconium Chemistries

C42: EFFICIENT CURING WITH INFRARED FOR INDUSTRIAL FINISHING

10:30 a.m. - 12:30 p.m.

C50: NEW! TRENDS IN POWDER COATING MATERIALS

- Advancements in Architectural Powder Coating
- Metallic and Special Effect Powder Coatings
- Advances in Fluoropolymer Coating Performance

C51: NEW! SUCCESSFUL TEAM BUILDING IN THE FINISHING INDUSTRY

- Building Your Finishing Dream Team
- Global Team Building Success at John Deere

C52: NEW! CONCEPTOS AVANZADOS DE PINTURA EN POLVO EN ESPAÑOL

WEDNESDAY, NOVEMBER 12 (continued)

1:30 p.m. - 3:30 p.m.

C60: NEW! TROUBLESHOOTING YOUR POWDER COATING OPERATION

C61: NEW! THE EVOLUTION OF CARC COATINGS

C62: NEW! IT'S ALL IN THE DETAILS

- Hook & Rack Strategy to Improve Productivity
- Improve Coating Quality & Reduce Rejects with In-line Rack and Fixture Stripping

THURSDAY, NOVEMBER 13

8:00 a.m. - 10:00 a.m.

C70: NEW! POWDER COATING BEST PRACTICES

- Powder on Powder Applications

C71: NEW! PAINT HOOKS & RACKING: THEY DO MAKE A DIFFERENCE

- Racking Up Profits
- Paint Hooks: Get Grounded and Make Contact!

C72: NEW! INNOVATIONS IN LIQUID FINISHING

- Liquid Coating Application Equipment Choices
- Maximizing Energy Savings in Finishing
- Increasing the Efficiency of Your Finishing Process
- The Benefits & Risks of Plural Component Paint
- New Trends in Paint Circulating and Pumping Systems

10:30 a.m. - 12:30 p.m.

C80: NEW! INNOVATIONS IN TESTING

- Improved Pretreatment Coating Weight Measurements Using X-Ray
- What Color is Your Part?

C81: NEW! UNDERSTANDING PIPE & TUBE COATINGS & APPLICATIONS

- The Hidden World of Fusion Bonded Epoxies
- Application Equipment for Powder Coating
- Application Equipment for Liquid Coatings

C82: NEW! BUILDING A QUALITY PRETREATMENT SYSTEM

- Why Cleaning and Rinsing are Important Steps in Pretreatment Processes
- Pretreatment Troubleshooting

1:30 p.m. - 3:30 p.m.

C90: FAST COLOR CHANGE

- SMT Case History—"The Peacock in the Window"
- The Evolution of Color Change
- Fast Color Change — It's About Time

REGISTER TODAY!

Visit

www.fabtechexpo.com

to register for the exhibition and conference sessions.



Letter To The Editor

Dear Editor,

Reference: Microconstituents in Wastewater Treatment and Ecotoxicology column by John Seldon. CFCM May/June 2014, Page 1. Follow up comments.

Thank you for the opportunity to submit my column on microconstituents (MC) in wastewater for CFCM's May/June, 2014 edition.

Since writing that column, I have come across a number of recently published articles that address concerns similar to those outlined in my column for CFCM. This topic is both current and alarming.

From the May 11, 2014 New York Times Week in Review section article entitled "The Toxic Brew in Our Yards" (page 4) which addresses dangerous pesticides from non-point sources finding their way into receiving streams, consider the following:

"The amounts of these chemicals are small and often considered "acceptable," but scientists now know that they have a cumulative effect."

"They "disrupt" or throw out of whack,

the endocrine system, made up of glands and hormones that control almost every aspect of our bodies' functions."

and
"Endocrine disrupters are linked to an increased risk for breast and prostate cancer, thyroid abnormalities and infertility. ... links exposure to chemical contaminants to diabetes and obesity."

From an article entitled "Green group targets beads" by Paul Morden (OMI Agency) in The London Free Press of June 23, 2014, Morden reports on the use of plastic microbeads in cleaning and personal care products and how there is an increasing call for their being banned as an environmental hazard. Ironically these beads, like some of the MCs addressed above and in the writer's article, also pass through wastewater treatment plants which cannot capture them as they are too small and are not changed by the wastewater treatment process. They may adsorb some of the harmful chemicals found in a receiving stream. Ingested by fish and other wildlife, these beads can then block

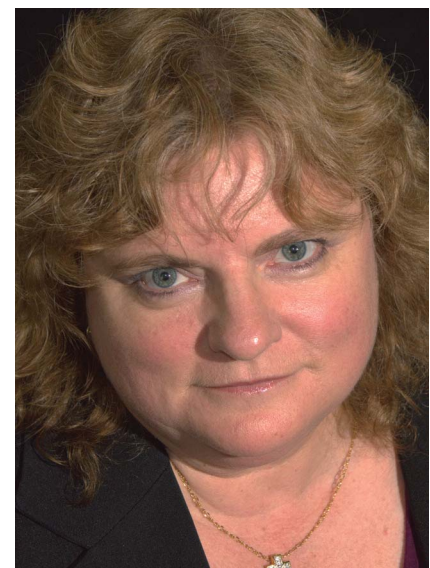
the animals' physiology, possibly killing them. If these animals are eaten by humans, the toxins adsorbed by the microbeads may then cause illness in humans. These microbeads are a double whammy – their size and make-up could harm aquatic animals that ingest them. Compromised fish may subsequently harm humans who eat them with the toxic chemical found attached to the microbeads from the receiving stream.

From Mr. Morden's article, quoting Brenda Lorentz, vice-president, Friends of the St. Clair River:

"(Microbeads) are everywhere. They are in toothpaste, they are in shampoo, they are in face scrubs, on and on and on."

Indeed a segment on a recent edition of the American PBS News hour program highlighted the microbeads controversy addressed above.

But it doesn't end with effluent discharge - biosolids are also involved. There is also a concern that MC's may adversely affect microorganisms found in biosolids. The Water and Environment Technology publication, Volume 26, No. 6, page 21 (June 2014) quotes an American study in part "If paracoccus denitrificans PD 122, the denitrifying bacteria in biosolids, are



deactivated by such microbial agents as tricolosan, the soil's quality degrades ..."

There are thousands upon thousands of exotics entering our wastewater systems and being sent on to our receiving streams. You remember our receiving streams don't you? They are the upstream source of your water supply. This is a threat to public health that is just now being addressed.

*Yours Truly,
John Seldon*

Send your Letters To The Editor attention Sandra L. Anderson, sandra.anderson@cfc.com.ca

Contents

FEATURES

Industrial Finishing

- 20 Waterborne Wood Finishes and Stains**
Continued from front cover... A look at how waterborne paint and stain products have improved and are in demand in the marketplace.
- 21 Powder Coating Quick Colour Change**
Continued from front cover... Manufacturers discuss their Quick Change Colour systems for Powder Coating.
- 23 Pretreatment and Washing**
The importance of cleaning and rinsing.
- 26 Flatline Finishing Solutions**
- Plating and Anodizing**
- 28 Anodizing Trends**
Fred Mueller discusses trends in anodizing—Then and Now.
- 30 Power Supplies and Rectifiers**
Rectifiers, Pulse Plating, Waveforms, Power Supplies.

Paint & Coatings Manufacturing

- 32 Fillers**
Discussing the importance of fillers in paint and coatings.
- 34 Anti Graffiti Agents**
Combatting Graffiti. The industry has come a long way when it comes to anti-graffiti.
- 35 Ontario Paint Recycling**
Paint Recycling in Ontario: Putting on the Breaks? With Gary LeRoux.
- 39 Flame Retardants**
Flame Retardants basics.



19

DEPARTMENTS

- 5 In The News
- 11 CPCA Corner
- 40 Calendar of Industry Events
- 41 New Products and Technologies
- 43 AD Index
- 43 Subscription Form



14

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EDITOR
Sandra Anderson
519-442-4071
Fax 519-442-1359
sandra.anderson@cfc.com.ca

COPY EDITING/PROOFREADING
E. J. Burns Anderson

PUBLISHER AND SALES
Pete Wilkinson
705-296-3030
Fax 705-296-3031
pete.wilkinson@cfc.com.ca

VICE-PRESIDENT, ACCOUNTING, CIRCULATION AND SALES
Brian Jones
905-405-1500
Fax: 905-592-1880
brian.jones@cfc.com.ca

GRAPHIC DESIGN
Allan S. Bates
416-485-9229
Green Apple Prepress
allan.s.bates@sympatico.ca

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Suite 259
2186 Mountain Grove Ave.
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L7P 4X4

In the News

Environment Committee, especially with its Paint and Coatings Working Group.

Alex Drody of Cloverdale Paint and Madelyn Harding of Sherwin-Williams will receive the Industry Statesman Award. This award is presented to individuals who have recently retired or are retiring and have made a significant contribution to the association at the national or local level.

Both Mr. Drody and Ms. Harding have been strong representatives of the paint and coatings industry throughout their careers. Mr. Drody has been an active participant over the years in CPCA's annual conference and its management information services, while Ms. Harding has been a strong member of the Health and Safety and Environment Committee. She has offered vital input regarding the development of Canadian VOC regulations and the use of paint-related substances listed in the widely respected Chemicals Management Plan.

The CPCA's highest honour, the Roy Kennedy Outstanding Achievement Award for 2014, will be presented to Mike Klein, President and CEO of Dominion Colour Corporation. The award will be presented at CPCA's upcoming annual conference in Quebec City on October 5-7, 2014.

CPCA presents this award annually to an individual who epitomizes Roy Kennedy's dedication to the paint and coatings industry and his outstanding volunteer service to the association and its members.

With more than 30 years in the industry, Mr. Klein joined Dominion Colour Corporation in 1987. He became a member of CPCA's Board of Directors in 2001.

"I am delighted to see Mike and Dominion Colour receive this recognition," commented Gary LeRoux, CPCA President. "Mike has provided strong leadership to Dominion Colour for many years with customers and operations throughout the world. It's a truly successful Canadian company with a strong global presence in supplying several industry sectors, including paint and coatings."

Past recipients of the Roy Kennedy Outstanding Achievement Award include Dale Constantino, President and CEO of General Paint Corporation, Beauti-tone's Darrin Noble, Brian Edwards of DuPont Performance Coatings and Wink Vogel, the Chairman of Cloverdale Paint.

This year's Conference and Annual General Meeting will include, among others, speakers from Orr & Boss, FPIInnovations, NanoXplore, Univar, Product Care, Alias Color and renowned keynote speaker Stéphane Simard.

They will all update attendees on the latest trends, opportunities and challenges facing the Canadian paint and coatings industry.

About CPCA

Since 1913, the Canadian Paint and Coatings Association (CPCA) has represented Canada's major paint and coatings manufacturers, and their industry suppliers and distributors in three primary product categories: architectural paints, industrial products and automotive coatings. In Canada, CPCA members have more than 261 paint manufacturing establishments own more than 3,000 retail outlets, supply products to another 3,000 retail stores and more than 5,500 auto body shops. This represents annual retail sales of more than \$10 billion, employing directly and indirectly 31,800 employees.

CPCA Grants Diploma in Coatings Technology

The Canadian Paint and Coatings Association (CPCA) is proud to announce that Andrew Aoun is the latest graduate of its Coatings Technology course.

Mr. Aoun successfully completed all three semesters of the courses required for the Diploma in Coatings Technology. The courses provide a solid foundation in many aspects of coatings technology that can be beneficial to people working in the paint and coatings industry. In recent years, more than 800 graduates have earned the diploma, which focuses on theoretical concepts, industrial paint applications and sales and marketing.

"Congratulations to Andrew on earning CPCA's Diploma in Coatings Technology," said

Gary LeRoux, President of CPCA. "We're pleased to offer accessible e-learning opportunities to help our members advance their careers in the coatings industry. Our interactive courses cover all elements of the industry, while leading to job promotion and increased trainee retention and production."

The Diploma in Coatings Technology is

designed for employees of paint manufacturers in product development, sales and marketing. It also helps those engaged in raw materials distribution in the coatings industry train new employees and paint contractors who need to understand the performance qualities of the products they use. It is also beneficial to those who wish to find a career in the paint and coatings industry, including retail sales staff seeking greater product knowledge.

CPCA's online training products are an important part of the association's offerings for industry, providing excellent learning opportunities for members and non-members. Along with the Diploma in Coatings Technology, CPCA also offers online training for Transportation of Dangerous Goods (TDG) and WHMIS.

To learn more about CPCA's e-learning opportunities, go to www.canpaint.com.

ECOAT14 – It's a Wrap


ECOAT14 was held April 22-24 at the Rosen Centre Hotel in Orlando. With a robust attendance, beautiful weather and a top-notch program, it was

primed for success. The Keynote presenters addressed very relevant topics for our industry and were followed by other good sessions and lots of fun in other associated events.

ECOAT14 kicked off with a luau-style Networking reception outside by the hotel pool, taking advantage of a beautiful, welcoming Florida evening. Attendees enjoyed snacks and drinks to the beat of steel drum band Calypso while socializing with colleagues and potential customers.

Maureen Midgley, Henkel Corporation, launched the event Wednesday morning with her dynamic keynote address, "The Chemical Industry's Response to Trends and Innovations in the Transportation Industry." This session was followed by an industry favorite, Matt Kirchner, American Finishing Resources. Kirchner discussed how to differentiate yourself from the crowd in his entertaining and provocative presentation, "Marketing for Ecoaters." To round out the morning session, a panel discussion led by coatings experts fielded many audience questions in the "Advancements in Coatings" session.

Thursday opened with a thought-provoking




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In the News

keynote address by Joy Forsmark, Ford Motor Company. Ms. Forsmark surveyed several recent USAMP programs that have addressed corrosion challenges, with particular focus on a Magnesium – Intensive Front End Development Project. Following that was Axel Linnewerth, PPG Industrial Coatings, sharing his knowledge and expertise on REACH legislation. The morning concluded with an “Advancements in Pretreatment” session, another very productive panel discussion with audience participation.

Each afternoon presented a variety of workshop choices, allowing attendees to customize this portion of their conference experience.

ECOAT14 concluded with “The Pillars of Social Media Success” by Chuck Gault, Max Coatings. Gault implemented a strong social media and public relations program in late 2012 and in this presentation shared his stories, tips and tricks for success.

A bonus for ECOAT14 attendees was the

Coatings & Cocktails session, giving attendees open access to industry experts in the fields of Pretreatment, Paint, Equipment and Filtration in a casual setting and a cocktail in hand.

Evening Exhibits offered a great networking forum. Industry suppliers hosted a festive venue to talk shop, respond to attendee issues, and provide some fun. This year attendees were entertained with caricatures and magicians, a casino party and racing simulators, and overall merriment.

The Industry Awards Banquet was a nice setting to recognize worthy individuals for their contribution to the industry and to the conference. The Electrocoat Association will continue its effort to promote members’ products and services and to be a strong voice in encouraging the use of electrocoating throughout the industry.

First CASF Golf Tournament

The Canadian Association for Surface Finishing will be holding its first Golf Tournament on

Wednesday Oct. 8, 2014 at the Piper’s Heath Golf Club, Hornby, ON

www.casf.ca

Company News

Unipex Group Announces Acquisition of Ferguson Chemical Innovation

Unipex Group, through its wholly owned subsidiary, Unipex Solutions

Canada Inc., has bought Ferguson Chemical Innovation.

With the acquisition of Ferguson Chemical Innovation (Ferguson), Unipex Solutions Canada strengthens its industrial portfolio and gains access to new markets and customers for its existing line of products in Canada and the United States.

Ferguson’s proven manufacturing and supply experience to the Rubber, Coatings, Plastics and Graphic Arts markets in Canada and the United

States, along with its combination of strong technical support and innovative proprietary products, has allowed the company to develop a unique position with customers in North America.

“This acquisition is essential to our growth plans for the industrial portion of our business and will considerably increase our footprint in North America,” said Patrice Barthelmes, President and CEO of the Unipex Group. “The quality suppliers represented by Ferguson and the high level of professionalism we have observed in the Ferguson team are complementary to Unipex’ lines of products and business approach. The combination of Ferguson’s value-added capabilities and Unipex’ ability to market these products will generate a real opportunity for both businesses to benefit from each other’s strengths. We are delighted to have David Jackson join our management team to help us grow our business, and are equally happy to welcome the Ferguson team into our group.”

“I’m proud to bring my team and Ferguson’s century in specialty chemical distribution expertise to the Unipex family,” said David Jackson, President and CEO, Ferguson Chemical Innovation. “And I’m excited about the competitive muscle and marketing-reach this deal represents for our customers.”

For the time being, Ferguson will retain its own visual identity and operate as a boutique brand under the Unipex umbrella.

Unipex Group is a privately held company specializing in the development, production, marketing and distribution of active ingredients, specialty chemicals and other chemical products in the cosmetics, pharmaceutical, nutrition and industrial sectors. It is also active in the areas of vigilance and consumer testing through its Iris division. Its distribution and marketing network serves more than 50 countries in North America, Europe and Asia. It counts six offices across North America and Europe. Unipex Solutions Canada is the wholly owned subsidiary of Unipex Group responsible for the North American distribution activities of the Unipex Group in the cosmetics, pharmaceutical, nutrition and industrial sectors. www.unipex.com.

Ferguson Chemical Innovation is a Canadian chemical supplier and represents a trusted portfolio of products and technologies from industry leading suppliers to support manufacturers in graphic arts, coatings, rubber, plastics and adhesives.

Sansin Corporation Donates Eco2 Recycled Wood Finish to Neighborhood Pavilion in Dorset, ON

The Sansin Corporation today will donate a portion of its Sansin Eco2 recycled wood finish to be used on a 36’ by 36’ timber frame pavilion in Dorset, ON.

The construction of the pavilion and wash-rooms is a community not-for-profit project with public and private sponsors. The pavilion will be used for community activities including picnics, craft sales, concerts and sporting events.

Portico Timber Frames were chosen to design and manufacture the structures and oversee the entire construction process. Many organizations and people in the local community have also donated their time to assist on this project.

Sansin Eco2 is a zero-waste solid color exterior and clear interior wood finish that was introduced in 2012. It is offered as a limited edition finish and is available in lava, adobe and charcoal colors for

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the exterior and clears for the interior.

"Having a structure like this will benefit the entire community," said Sjoerd Bos, Vice President at Sansin. "We are pleased to help the neighborhood of Dorset and Portico Timber Frames by donating this wood finish."

"We would like to thank all of our sponsors, the community and Sansin for their generous donation," said Brad Johnson, President of Portico Timber Frames. "This pavilion will be a great resource and with Eco2 it will hold up to harsh elements and look beautiful for years to come."

Graco wins award for Innovation at Wood Show

The seven winners of the Challengers Distinguished Achievement Award were announced Aug. 20 during the International Woodworking Fair at the Georgia World Congress Center, Aug. 20-23 in Atlanta. Graco Inc.'s ProMix PD2K, a positive displacement proportioner for mixing wood finishes and paints, was a finalist in the IWF 2014 Challengers Awards competition. Having the material mixer in close proximity to the spray guns makes for a "significantly smaller" flush zone, Graco says. This translates into helping the wood finisher reduce material consumption, waste material costs and facilitate faster color changes.

According to Graco, the ProMix PD2K offers many advantages, including:

- Up to 80 per cent reduction in flushing waste over the traditional proportioning systems;
- Limited mixed material in the system, making it well suited for short pot life materials;
- Faster color changes and less material to flush equals less waste and less downtime;
- Stalls under pressure for consistent, on-ratio results (within 1% accuracy);
- Ability to proportion both epoxy and urethane

with one system;

- Manage up to 30 colors and four catalysts with two or four dosing pumps; and
- Field serviceable in less than 20 minutes with no need for factory rebuilds like gear pumps.

The ProMixPD2K, also won a 2013 Visionary New Product Award at the 2013 AWFS Fair in Las Vegas.

Environmental Award for Surrey Company Working to Eliminate Toxic Solvents

TBF Environmental Technology Inc. – a Surrey, BC-based company that has developed several ground-breaking non-polluting solvent formulas – is being presented with a prestigious environmental award by the Surrey Board of Trade. The accolade is only given to companies that "demonstrate a consistent respect for the environment."

"We're delighted and honoured to be recognized by the Surrey Board of Trade for our work," says David W. Rowat, CEO of TBF. "TBF's green solvents have been developed to provide safe, effective replacements for conventional toxic solvents used in a variety of industries. Over 10 million US workers are exposed to toxic solvents every day. We want to improve working conditions and worker health by replacing toxic solvents with our environmentally-friendly substitutes."

TBF Environment Technology Inc.'s leading solvent ZemaSol is certified as a Clean Air Solvent by California's South Coast Air Quality Management District (SCAQMD), the first such certification in more than 20 years. ZemaSol does not emit Volatile Organic Compounds (VOC's), ozone creators or depletors or hazardous air pollutants into the environment and does not contribute to global warming. VOC's are found in most industrial solvents. VOC's are known to damage human health



Axalta Coating Systems Hosts Canadian Instructor Workshop

Axalta Coating Systems, a leading global supplier of liquid and powder coatings, recently led a week-long professional development session for college and high school instructors at Axalta's Pointe Claire Customer Training Centre. This is an annual event that Axalta hosts as part of its commitment to strengthening the Collision industry in Canada.

The sessions covered various topics including: industry trends, appropriate spray materials and equipment updates. One of the popular topics was the trends and techniques for aluminum repair. Axalta trainers from across Canada attended so that regional issues could also be addressed. I-CAR Canada, a training and recognition program run by the Automotive Industries Association of Canada and designed to update skills in the collision repair industry, joined the group to lead a couple of the interactive, collegial sessions.

A tour of a large truck manufacturer was a highlight for many. Participants had an opportunity to see all of the steps in the build process, including the potential challenges of painting a large vehicle.

"The stronger our colleagues are at the college and high school level, the stronger our industry can be," says Axalta Instructor Normand Cormier. "The materials that attendees receive and the networking opportunities provide support for these great leaders, who often work alone or in small teams."

Bill Speed from the Toronto District School Board values the experience. "I want to be able to pass on to my students the most current information possible so that they are better prepared to go off into the industry if they so choose," says Speed. The hands-on experience for these leaders in our classrooms is essential so that they can share the excitement of the industry, as these great young folks are making career decisions.

If you would like to be part of this event next July, please call the Axalta Customer Care Centre at 1-800-668-6945, Option 4.

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CanLak and Verinlegno of Italy have entered into a joint venture to provide the latest technologies to the Canadian Market.

In the News

both in the short and long term. Effects include tremors, impaired memory, severe hearing loss and central nervous system damage.

TBF's alternate solvents work effectively across a range of applications and are designed to be safe for people and the environment.

AGC FluoroCompounds Group Launched to Meet Global Demand for Custom Compounding Solutions

AGC Chemicals Americas Inc., world leader in fluorochemicals, has formed the AGC Fluoro Compounds Group to focus solely on the development, production and marketing of fluo-

ropolymer compounds.

Drawing from an extensive global supply chain of resins and fillers, the AGC FluoroCompounds Group can produce any filled PTFE or melt processable fluoropolymer compound customized to a client's specific needs anywhere in the world. The group also offers a wide selection of off-the-shelf compounds based on AGC Fluon resins that can be used for increased chemical, wear and creep resistance, toughness, lubricity, and thermal and electrical conductivity. All products are manufactured to precise specifications.

IGP Pulvertechnik AG expands, adds IGP North America Division

IGP Pulvertechnik AG is pleased to announce the creation of a new division, IGP North America. Founded in 1965, IGP Pulvertechnik AG has over 45 years of experience in the world of powder coatings and 400 employees in Europe. IGP's headquarters are in Wil, Switzerland. IGP is known worldwide for extremely high quality Swiss manufactured coatings, uncompromising reliability and strong long-term partnerships with our customers.

The brand IGP stands for quality, safety and reliability - values that benefit our large and growing customer base. IGP Customers' and Partners' have come to expect innovative, reliable and economical powder coatings for a wide range of materials. Whether they are powder coating products for the architectural construction industry, general manufacturing industry, heavy transportation industry or the wood kitchen cabinetry and furniture industries. IGP consistently strives to find the best solutions for every customer. Quality, reliability, aesthetics, cost-effective solutions and the environment are of equally high importance to us at IGP.

Founded in 1965 and thus with more than 45 years of experience in the world of powder coatings, IGP has 400 employees in Europe.

Tartan Distributes Omya

Tartan Color Company of Mississauga, ON, Canada has been named a distributor for Omya Inc. Tartan

will distribute Omya's calcium carbonate product line throughout Canada. The portfolio includes both treated and un-treated grades from all Omya production sites. The addition of this product portfolio enhances Tartan's product offering in the plastics, coatings and ink markets.

"We are excited to have Tartan represent Omya as a full line distributor," says Alex Pose, vice president of sales for Omya Region Americas. "Tartan Color complements Omya's sales and marketing efforts with a shared commitment to excellent customer service, on-time deliveries, and a focus on providing value added solutions to their customers." Tartan Color operates warehouses in Toronto and Montreal, and can be reached at 888-540-7774, or visit their website at www.tartancolor.com.

Northspec Distributes AkzoNobel

Northspec Chemicals Corp. and AkzoNobel are pleased to announce Northspec's appointment as AkzoNobel's sole Canadian Distributor for their ethylene amines effective immediately.

With over 30 years of experience in ethylene amines chemistry and production sites in Europe and China, AkzoNobel's ethylene amines business occupies a leading position throughout the world. Key products such as DETA, TETA, TEPA, AEP are crucial to the epoxy industry and many others. More information on these products can be found on the supplier links at www.northspec.com or at AkzoNobel's ethylene amines site www.akzonobel.com/ea/aboutus/ethylene_amines/

Northspec Chemicals Corp. is a full service distributor specializing in the coatings, composites, adhesives, graphic arts, construction products, and related industries throughout Canada.

Nordson 50th Anniversary

Nordson Corporation is celebrating its 50th anniversary in business November 2014. More to come in the next issue of CFCM.

HGTV Home by Sherwin-Williams Designer-Inspired Color Collection Launches in Canada

Bringing their designer-inspired colors and wallpapers to a larger audience of homeowners, HGTV and Sherwin-Williams are launching HGTV HOME by Sherwin-Williams in Canada. First introduced to the U.S. market in 2012, the HGTV HOME by Sherwin-Williams collection features interior and exterior paint, wallpaper and pre-coordinated color palettes, making it easy for consumers to create a cohesive look throughout their home.

"Given the positive reception to HGTV HOME by Sherwin-Williams in the U.S., we're extending our successful partnership into Canada, to help more homeowners create beautiful, color-coordinated spaces," said Jackie Jordan, director of color marketing, Sherwin-Williams. "Consumers love having the ability to choose colors with confidence, and these palettes take the guesswork out of color selection by providing 20 colors that you can mix and match for a beautiful look in a room or throughout your home."

Each of the eight HGTV HOME by Sherwin-Williams collections features wallpaper, as well as interior and exterior paint color options. HGTV HOME by Sherwin-Williams Interior Acrylic Latex Paint is a zero VOC formula that provides a durable, washable coating for use in all areas of your home and is available in flat, satin and semi-

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gloss finishes. HGTV HOME by Sherwin-Williams Exterior Acrylic Latex paint provides a durable and mildew resistant coating for use on properly prepared wood, brick, concrete block, metal, aluminum siding and masonry and is available in flat, satin and gloss finishes.

Each palette highlights colors that are designed to work beautifully together, in any combination. Homeowners simply choose the designer-inspired look they want to achieve from a series of collections with varying themes. The interior and exterior collections include:

- The Softer Side – Features vintage elegance and a fresh approach to pastels and softer shades
- Coastal Cool – A palette that lives and breathes inspiration from the sand, salt and sea
- Neutral Nuance – Neutrals combined with the softest hints of color for a quiet, understated atmosphere
- Color Pizzazz – A palette with colors that reflect an upbeat passion for life
- Rustic Refined – Features colors that evoke a Southwestern villa or ranch in the heart of the desert
- Global Spice – An indulgent, exotic and versatile color palette
- Traditional Twist – A collection with classic appeal and unexpected variation
- Liveable Luxe – A palette with subtle, updated color variations for a classic, traditional home

"HGTV HOME by Sherwin-Williams has been extremely well received in the U.S. and we are excited to introduce these great products and color collections to our fans in Canada," said Ron Feinbaum, general manager and senior vice president, consumer products, HGTV.

www.sherwin-williams.com/hgtvhome-bysherwinwilliams

Brookfield Celebrates 80th Anniversary



Brookfield's DV3T Touch Screen Rheometer and Dial Reading Viscometer

Brookfield Engineering celebrate 80 years of innovation and customer service in 2014. It began in 1933 when Donald Brookfield, Sr. envisioned a new, unconventional approach to measuring viscosity. His experimentation with motors and springs in the basement of his family's home resulted in the creation of a single-speed instrument that would ultimately become known as "the world standard" in viscosity measurement and control.

Founding the business in 1934, Don made it his priority to offer "the highest quality instruments at the lowest possible price." Over the years he demonstrated this commitment to service by offering his loyal customers his newest innovations at little to no cost. Through the middle years Brookfield Engineering addressed issues of temperature control, small sample volumes and very low viscosities, continually adapting to the chang-

ing needs of industry. As technology marched forward, Brookfield answered the call by producing a wide range of digital and programmable viscometers & rheometers that operated in stand-alone or PC controlled modes. They also developed a complete range of in-line Process Viscometers that enabled manufacturers to measure viscosity continuously during production.

In 2004 Brookfield entered the Texture Analysis market, providing a perfect compliment to their line of R&D and QC testing instrumentation. The CT3 Texture Analyzer initially targeted the food manufacturing industry, but was later expanded to measure the mechanical flow properties of a wide variety of products in cosmetics, pharmaceuticals, and packaging.

And in 2010, the PFT Powder Flow Tester made its debut, providing quick and easy analysis of powder flow behavior in industrial equipment.

Most recently, Brookfield has added touch screen technology to several of their most popular instruments, continuing to innovate and address their customers changing needs.

www.brookfieldengineering.com

Seal-Krete Partners with Cloverdale to Provide High-Performance to Contractors

Canadian contractors can now purchase SEAL-KRETE High-Performance products exclusively through Cloverdale Paint. The SEAL-KRETE and Cloverdale Paint agreement includes distribution throughout 64 Canadian locations in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, and Quebec.

High-Performance products include Poly-Shell™ 7000, Epoxy-Shell 1000, Epoxy-Shell WB250, and Dura-Shell WB. These polyaspartic, epoxy, and urethane systems are designed for large- and small-scale residential, commercial, and industrial applications.

IGM Resins Acquires Insight High Technology Group


Strengthens global leadership position in photoinitiators and pharmaceutical intermediates.

IGM Resins, Inc., a leader in the development, manufacture and supply of products and technical services to the global UV ink and coatings industry

(a portfolio company of Arsenal Capital Partners), has announced the acquisition of Insight High Technology (IHT) Group. IHT is the leading manufacturer of photoinitiators, pharmaceutical intermediates and fine chemicals in China with strengths in technology innovation, scale-up and production.


Five Leading Additives in the Marketplace


According to a new study by the consulting firm Kusumgar, Nerfi & Growney, consumption of five of the leading additives for coatings and inks in 2013 was 1.02 million tons, as supplied, worth \$4.66 billion. A 5 per cent annual rate of growth is forecast through 2018. Included are rheology modifiers, foam control agents, wetting agents, dispersants, and slip & rub materials. Rheology modifiers are the largest additive type representing nearly 40 per cent of the tons in 2013. A wide variety of rheology modifiers are used depending on a product's technology and the properties required. Cellulosic, synthetic, and inorganic are the major rheology modifier categories. Disper-



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In the News

sants are the second largest additive in volume with one-fifth of the tons. They range from high volume polyacrylic/polycarboxylate types for titanium dioxide and fillers in WB architectural paints to highly specialized polymeric types for specific pigment use.

Foam control additives were third in volume representing 17 per cent of the tons in 2013. Products vary from higher performance silicone, surfactant and polymer-based products to the widely used mineral oil type products. Slip/rub materials were 13 per cent of the volume. Silicone and wax products are used for slip/rub. In contrast to the other additive types where inks take less than 10 per cent of the volume, about one-third of the slip/rub additives were used in inks.

Wetting agents were 11 per cent of the additive tons. They range from high volume alkoxylated surfactants to more specialized silicone, acrylic, acetylenic glycol derivatives and fluorosurfactants. In the alkoxylated surfactant category alkyl phenol ethoxylates continue to lose out to other products owing to environmental concerns.

www.kusumgar-nerfi-growney.com

People

Chris Merritt Celebrates 30 Years With Gema

Gema USA Inc., Indianapolis, Indiana announces that Chris Merritt is celebrating 30 years of service with the company. Chris is the General Manager for Gema USA Inc., a division of Graco Inc. His responsibilities include managing the powder coating business within Canada, United States, and Mexico for Gema USA Inc. Prior to starting his career, Chris received his B.S. degree in Mechanical Engineering Technology and Associate Illustration Degree from Purdue University. His entrance into the finishing industry began in 1984 as an engineer within the powder equipment group, Ransburg Gema, a division of the Ransburg Corporation. Chris gained valuable experience in a variety of sales, engineering, and management positions. Chris was promoted to General Manager of Gema in 2005 and has successfully guided the

Gema business unit through favorable and volatile industry and economic conditions.

Throughout his career, he has become recognized as an industry expert on powder coating, in both organic and enamel applications, and holds several US patents related to the powder coating industry. Chris is a published author and speaker on the subject of powder coating and actively presents at many industry technical conferences. Chris is a member of several industry associations, and is a strong supporter of the powder coating industry trade association, The Powder Coating Institute (PCI). He has served in a variety of leadership roles ranging from committee chairman to Board President. Chris currently chairs the Marketing Intelligence Committee and is serving his fifth term on the PCI Board of Directors. Congratulations to Chris Merritt on 30 years of service.

Gema, a Graco Inc. company, is the global leader in powder coating technology. From manual units to fully automated systems, Gema offers solutions to satisfy customers in a wide variety of end markets. Gema has worldwide headquarters in St. Gallen, Switzerland and a broad worldwide distribution network. Gema operates its North American Headquarters from Indianapolis, Indiana.

Graco Inc. supplies technology and expertise for the management of fluids in both industrial and commercial applications.

Nordson Appoints Robin Schwamberger as Liquid Systems Specialist

Nordson Corporation, a leader in liquid painting technologies, announces that Robin Schwamberger has joined the company's Industrial Coatings



Robin Schwamberger

Division as a liquid systems specialist.

In his position, Schwamberger will have responsibility for building liquid painting sales through Nordson's distributors, integrator partners and direct customers in the Midwest territory. His experience in selling high value-added liquid painting systems, his knowledge of automation, and long track record of successfully building distribution networks make him a great addition to the company's liquid sales team.

Schwamberger most recently held the position of market development manager with Autoquip. Prior to joining Autoquip, he held positions of increasing responsibility with Fanuc Robotics, Devilbiss Company and ABB Robotics. Schwamberger has a Bachelor of Science degree in Business Administration from Bowling Green State University.

Cefla Appoints Jacqueline Liger as Marketing Manager

Cefla North America, a leading provider of finishing, decoration and digital printing solutions for wood, metal, glass and other applications, is pleased to announce the hiring of its new Marketing Manager, Jacqueline Liger.

Liger comes to Cefla North America with an extensive background in marketing, communications and event planning, including more than

continued on page 12

Therma-Tron-X Expansion

Therma-Tron-X (TTX), a Sturgeon Bay, WI, manufacturer that specializes in complete finishing systems for industrial customers, have recently completed a 26,800-square-foot expansion – the fourth addition in the last three years. A 4,000-square-foot addition for the company's environmental division was completed in 2011. A 940-square-foot engineering addition was completed in 2012 and a 15,080-square-foot manufacturing addition was finished in 2013. TTX also has added 50 new jobs since 2012. The total square footage of TTX headquarters is now nearly 200,000 square feet.

The company had a celebration and ribbon cutting of its expansion completion on May 30th, 2014. Gov. Scott Walker and several other dignitaries were in attendance.

TTX was founded in 1971 as a manufacturer of custom-built industrial ovens, but now custom-designs and builds water and waste water systems and paint systems for major global manufacturers that include Honda and Caterpillar.

The company broke ground last fall on a 26,800-square-foot addition that now provides more inside storage for steel and other equipment for its large projects that can range from \$1 million to \$15 million.

Therma-Tron-X owner Brad Andreae said he never imagined the company's growth when he first moved to Sturgeon Bay, temporarily living out of a tent.

But in the beginning, he said his family and his father, Otto Andreae, who founded the company with Rusty Sherman, had little time for anything but work.



Ribbon Cutting for TTX's most recent expansion, (from right), Brad Andreae COO of Therma-Tron-X, Inc., Governor of Wisconsin, Scott Johnson and Mayor of Sturgeon Bay, Thad Birmingham.

"Our name brand [TTX] has become a standard in the industry. The skilled and dedicated workforce from North Eastern Wisconsin has allowed Therma-Tron-X to maintain and grow over the past 40 plus years," Brad Andreae told CFCM. "It has been slow and steady because we want our employees to be here for the long haul the rest of their careers. That takes time, training and investment."

The latest addition will enable Therma-Tron-X to increase its manufacturing capacity as they continue to meet the needs of manufactures and contract coaters and expand markets around the world.

Value-Added Membership

As the recognized voice of the paint and coatings industry in Canada, CPCA has been dedicated to taking collective action for more than 100 years. Consider just a few of the issues before the industry:

Globally Harmonized System for Labeling

How much will proposed new labeling regime for chemicals in the workplace cost you and how can it be reduced?

Low-level VOC Emissions

Will your products survive further reductions in VOC limits and still perform and sustain your business over the long term?

Chemicals Management

Are you aware of the current, ongoing assessment of the chemicals used in your products with new risk management actions required for many? Are your products compliant and do you care about which products might be banned or regulated in future and how that will be done?

Product Stewardship and Sustainability

Are you compliant with stewardship regulations and do you want to help shape the future of new regulations imposed by government on your business?

Top 3 Reasons to Join

- 1 Know what is being done to your business now, not after the fact
- 2 Take action and provide input to ensure your business can grow and prosper
- 3 Share the responsibility to counter measures that threaten your paint and coatings business and future trade

Stronger Together: CPCA provides the strength, commitment and resources to help you get informed, stay connected and sustain your business.



www.canpaint.com/membership

Taking Care of Business

Approval of Paint and Batteries ISPs Further Delayed by WDO Board

Unfortunately, the Board of Waste Diversion Ontario (WDO) could not arrive at a final decision at its July 17 meeting on the two Industry Stewardship Plans (ISPs) in Ontario – one from Call2Recycle for used batteries and one from Product Care Association for used paints and coatings. The Ontario Minister of Environment intervened at the 11th hour on July 17 and used his powers under the Waste Diversion Act to direct the WDO Board to conduct more consultations based on the concerns expressed by unnamed stakeholders. This was done despite the fact that all requirements under the ISP guidelines were fulfilled and extensive consultations took place over the course of the year. CPCA wrote to the Minister recently in an effort to resolve any pending issues on the ISP approval. CPCA remains hopeful that it will become clear that this is not only the best course of action for industry, but also the best way forward for better recycling in Ontario, which is the ultimate objective of the Waste Diversion Act. The paint industry fully understands the Minister's desire to look at possible new legislation for recycling, but this should not impede progress on a better approach for post-consumer paint recycling now. There was a new Waste Reduction Act being considered in the Ontario Legislature over the past year, but it did not stop the progress of the ISP application. Whatever legislation is passed, program operators in all industries will have to fully comply as they have done in the past in Ontario and other jurisdictions in Canada. It should be noted that British Columbia, with a population of 4.6 million, had a paint recovery rate of 6,000 tonnes per annum under Product Care, while Ontario, with a population of 13.6 million, had a recovery rate of 9,000 tonnes under Stewardship Ontario. CPCA looks forward to a better post-consumer paint-recycling program in Ontario in the near future, one that is better for all stakeholders: consumers, government, service providers and industry.

Code of Practice for MEKO: CPCA's Educational Campaign Tools

The final Code of Practice for 2-Butanone Oxime (MEKO) was published in Canada Gazette, Part I on June 28, 2014 to help reduce inhalation exposure to this substance by the general public during and immediately following interior application of consumer alkyd paint products. CPCA was successful in negotiating a voluntary code for industry in lieu of a more costly and onerous regulation. CPCA is in the process of finalizing educational materials

related to the Code of Practice, such as updates to its website, a video, a downloadable brochure and a fact sheet. It will be important for CPCA to ensure that this Code of Practice is well implemented within the industry and meets the federal government's expectations and objectives over the five-year period, which extends from now until the Code of Practice is formally reviewed in July 2019. The federal government would also like CPCA to identify and reach out to specialty paint markets that need to be informed and engaged with respect to the Code of Practice. Members and non-member companies intending to adopt the Code should inform CPCA of their five-year action plan and on any educational materials they may need. CPCA will consult with members and seek feedback once the educational materials are completed.

GHS Implementation Update

CPCA has taken measures to raise the relevant issues associated with the implementation of GHS for workplace chemicals in Canada and continues to do so at the most senior levels of government. CPCA's key focus has been seeking a means by which the federal government can assure industry has full alignment with GHS implementation in the United States, and other countries, to prevent huge cost impacts on companies doing business in Canada. CPCA will be meeting soon with the Deputy Minister of Health Canada, the most senior official responsible for GHS in Canada, to address four critical areas related to implementation. These areas include the fact that the final HPA regulations must be published in Canada Gazette, Part II as soon as possible, and should contain clear language that facilitates alignment with the United States. Requisite training documents and an educational campaign must also be launched to ensure all sectors—in all provinces—are fully informed of the new GHS requirements. It is important to ensure that there is an early acceptance mechanism or procedure authorizing the entry of GHS-compliant labels from the U.S. and other GHS compliant jurisdictions into all Canadian provinces and territories, as originally promised by Health Canada and the Regulatory Cooperation Council. Finally, Canadian companies must have two years or more to complete the transition to full compliance with the new Hazardous Products Act and Regulations, as this will ensure that existing inventories of products with labels and MSDS per the current WHMIS requirements can be used after June 1, 2015. Given that the GHS legislation was passed

in June, Canadian industry remains hopeful that appropriate actions will be taken to ensure regulations are fully aligned with those of the United States and other countries. That was the original intent of GHS from the beginning and it is still unclear if there will be full alignment as envisioned by the Regulatory Cooperation Council (RCC) in 2011.

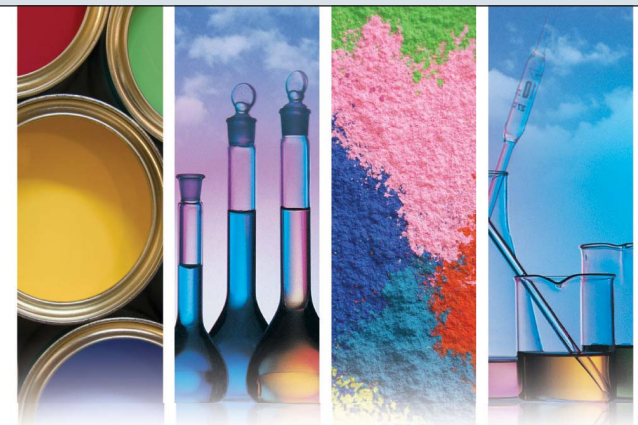
CPCA Update on the Six-month CMP "Roadmap"

CPCA continues to take a leadership role on the ongoing work of the federal government's Chemical Management Plan with respect critical paint industry chemicals being assessed for toxicity impacts. Watch for the publication of draft risk assessment and risk management scope documents over the next six months for MDI-MDAs, Cobalt substances and International Classified Substances groupings (summer 2014), for two subgroups of the Petroleum Stream 4 and Petroleum

Stream 0 Coal Tars, expected before year end. A final screening assessment report and risk management approach will be published for Acetone, Biphenyl and Propene and Petroleum Stream 3 fuel oil no 2. The following substances, hexabromocyclododecane (HBCD), polybrominated diphenyl ethers (PBDEs), perfluorooctane sulfonate (PFOS) and longchain PFCAs/PFOA, will be added to the Prohibition Regulations (a draft Risk Management Instrument). A Code of Practice will be proposed for DEGME before the end of 2014. The Amendment of the Environmental Emergency Regulations is expected in Canada Gazette, Part I late in 2014 or early in 2015.

New Mark for Limited Quantities of Dangerous Goods Adopted by Transport Canada

Transport Canada has adopted a new marking for limited quantities of dangerous goods that replaces the old markings



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as of July 14, 2014. As an option, members should note that the marks presently in the Regulations (UN number in empty square-on-point or the words Limited Quantity or the abbreviation Ltd Qty on paint labels) will be accepted instead of the new mark until 2020. The new standards bring consistency in trade relations with all trucks operating in Canada and the U.S. now needing to use the same safety marks under the same conditions. First responders who arrive at a vehicle in an emergency will quickly be able to identify the contents of the vehicle and then be able to take appropriate measures. The “danger” placard is to be used to spot different classes of dangerous goods and new safety marks have been introduced to distinguish the presence of chemicals like organic peroxides and marine pollutants.

Management of CMP-2 Grouping Phthalates Substances

At the latest meeting of the CPCA Health, Safety and Environment Committee, a questionnaire was discussed about the management of CMP-2 grouping phthalates substances at paint manufacturing sites. It was prepared by Environment Canada and distributed to all CPCA members involved with one or more of the 33 phthalates contained in this grouping. Environment Canada could not find any volunteers among the heaviest paint manufacturer users of phthalates (more than 1,000 kg/year) to participate in the sampling campaign. This was due to the fact that the management of these substances, containers or spent solvents containing them, is very similar to BDTP. Virtually all the wastes are sent to waste handlers and recycling/reclaiming companies and there are no direct releases to wastewaters. As the main focus of Environment Canada’s risk assessors is the environmental releases of phthalates into water, this makes it less pertinent in performing any sampling on- and off-site. However, a questionnaire was prepared and distributed to obtain the names of recycling/reclaiming companies to further vali-

date the management of phthalates originating from paint formulations.

RCC Nanomaterials Initiative

The summer 2014 issue of Canada’s Chemicals Management Plan Progress Report states that the Canada-U.S. Regulatory Cooperation Council (RCC) Nanotechnology Initiative is complete and the final reports will be published this summer. The report will include recommendations on how Canada and the U.S. can align their nanomaterial regulatory work, including the application of consistent risk assessment approaches and methodologies and identifying categories of nanomaterials. Canada recently endorsed OECD recommendation on nanomaterials.

An important meeting by the OECD Expert Working Group on Categorization of Manufactured Nanomaterials will be held in Washington, D.C. on September 17-19, 2014. The outcome will serve the development of regulatory frameworks as it will provide recommendations on how manufactured nanomaterials should be categorized for purposes of testing, read across/Structure-Activity Relationships (SAR), risk assessment and risk management. The ACC Nano Panel is engaged and welcomes any contributions from member companies regarding the Canadian perspective. Please advise CPCA if you would like to become involved.

DSL IU Update: Clarification on Painted Products Used For and By Children

With regards to the lists provided by Environment Canada on paint-related (13) and adhesives- and sealants-related (12) substances confirmed to be in commerce as a result of the DSL Inventory Update 2, CPCA members did a preliminary review and had a number of questions or concerns with respect to substances contained in some colorants used to tint paints. CPCA members wanted Environment Canada to clarify how far risk assessment and risk management actions could extend, since colourants can be added to

paint and subsequently used in a home where children are living. Although the focus is on products that can be directly used by children (e.g. toys) or primarily intended for children (e.g. cribs, swings), it is difficult for paint companies to tell if their general paint products are also being used by DIYers to refresh articles, walls or floors where children live.

Health Canada later confirmed that their intent is to identify if any substances are likely to be found in paints and coatings or painted items intended to be used for or by children and in Canadian commerce. In the case of paint, this would apply to substances in paint that kids may use (e.g. finger paints, face paint, craft paints, stamp ink) or paint intended for use on children’s items, such as paint used in the manufacture of children’s products. CPCA encouraged Health Canada to send the information on DSL IU 2 substances used by or for children to the manufacturers of artistic paint and the Canadian Toy Association.

CPCA Urges Environment Canada to Add AMP to VOC Exclusion List Under CEPA

AMP (2-amino-2-methyl-1-propanol CAS # 124-68-5), a non-categorized substance on the Domestic Substances list, is a multifunctional specialty additive that is widely used in waterborne low- to zero-VOC paint formulations and is also contained in some other raw materials. The compound allows paint companies to avoid reformulating with less-favorable neutralizers such as caustic soda or ammonia. In a recent decision, the U.S. Environmental Protection Agency classified this substance as VOC-exempt. CPCA believes that AMP should also count among the tools available to Canadian formulators to meet their current and future formulation needs. CPCA asked for AMP to be added to the VOC Exclusion list under the Schedule I of CEPA, 1999 and, similarly to TBAC, to also be exempted under the Third VOC Regulations. A copy of the letter is posted

on the CPCA website for its members.

CPCA Now Observer of ISO Work on Product Category Rules for Environmental Product Declarations

With the proliferation of green measurement systems and labels, there is a growing need to understand the true impact of a product on the environment. Environmental product declarations (EPD) provide quantifiable environmental data to compare products that fulfill the same function. In order to create comparable EPD, they must follow the same rules and guidelines, which are called product category rules (PCR). PCRs, similar to standards, are best developed in a collaborative manner. CPCA has signed up to be an observer and will participate in further work on PCRs for architectural coatings under ISO 14025 and UNCPC - Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures.

Multi-Sector Air Pollutants Regulations Proposed

CPCA informed its members in June 2014 of the proposed Multi-Sector Air Pollutants Regulations (MSAPR) that are a key part of the federal responsibility for implementing the new federal/provincial/territorial Air Quality Management System (AQMS). The MSAPR impose mandatory national performance standards on specific sector/equipment groups in order to establish consistent emissions limits for regulated industries across the country. It includes requirements for the cement manufacturing sector. Consultations with stakeholders will take place in the near future in Canada Gazette, Part I. Additional industrial sectors, including the chemical sector, will be added to the regulations in the future.

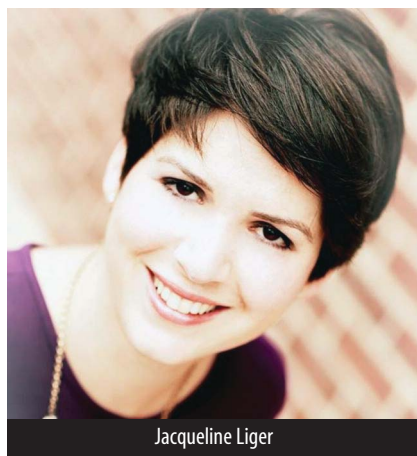
Gary LeRoux is the president of the Canadian Paint and Coatings Association based in Ottawa, ON.

In the News

seven years in the woodworking industry. Overall, she has more than 10 years of experience both the U.S. and Europe.

At Cefla North America, Liger will be responsible for developing and implementing new strategic marketing communication initiatives and building a strong public relations network. She will also manage events and trade shows, provide support to the field sales teams, and maintain a strong brand identity and presence for the company’s North American businesses; woodworking and dental equipment and furnishings.

Liger is a graduate of Winthrop University in Rock Hill, SC and the French Institute of Communications in Paris. She is fluent in English, Italian and French. Prior to joining Cefla, Liger spent the last two years providing strategic consulting and marketing services to a variety of local and interna-



Jacqueline Liger

tional companies. She lives in North Carolina with her husband and two children.

Chromaflor strengthens in the Americas

Chromaflor Technologies, has recently taken several steps toward strengthening its organizational framework regionally, and further improving syn-

ergies as a leading global supplier of colorant systems, chemical and pigment dispersions.

Dr. Brij Mohal, former global V.P. of Marketing and Technology, will take on the newly created position of Vice President and Managing Director - Americas. Mohal will retain his global responsibility for technology initiatives. Concurrently, Chromaflor has transitioned Larry Haines from his role in Strategic Business Development to serve as Coatings Business Director, Americas.

As Managing Director, Mohal will focus on improving processes in the Americas with a strong emphasis on customer satisfaction and technology development.

Haines will be responsible for planning and implementing sales initiatives and overseeing marketing and technical service in the coating’s markets throughout North and South America.

Kenny Messer Appointed President of Sartomer Americas

Sartomer, a business unit of Arkema Inc., and a global leader in specialty acrylate and methacrylate monomers and oligomers, today announces that Kenny Messer has joined the company as regional group president of Sartomer Americas. In this new role, Messer will oversee operations in North and South America to deliver the focused innovation, clear strategic thinking, and industry-leading performance customers have come to expect from Sartomer to help them solve their toughest formulation challenges. He will report directly to Doug Sharp, global group president of Sartomer. Messer comes to Sartomer from a career at Milliken Chemical in Spartanburg, S.C., that spanned more than 25 years. At Milliken, Messer started as a production manager and then

held progressively more senior business positions until finally being named vice president of specialty chemical and packaging in January 2014. Along the way, Messer earned many business excellence awards for personal achievement and for group operations under his direction.

Messer holds a B.S. in chemistry from Western Carolina University and studied business in the Advanced Management Program at the Fuqua School of Business, Duke University. He is very active in the community, holding many leadership positions at Western Carolina University (current Board of Trustees member, past president of the Athletic Board of Directors and the National Alumni Association Board of Directors).

Vancouver's Hero Products, new appointments

I.C.T.C. Holdings Corporation announces the appointment of Carlos de Melo to the position of VP and General Manager, HERO Products Group, North American Operations. Mr. de Melo has been involved in the automated dispenser industry for over 35 years and for the past 15 years with HERO as VP, Customer Service.

Mr. de Melo will remain working from HERO's Headquarters in Vancouver Canada.

I.C.T.C. Holdings Corporation has also appointed Terry Newton as Sr. VP Global Sales - Key Accounts. Mr. Newton has been involved in the delivery of custom colour, most recently with X-Rite as Vice-President, Sales & Business Development, and has worked with most of the major

customers such as; Akzo-Nobel, Sherwin-Williams and The Home Depot.

Terry will work from HERO's Headquarters in Vancouver Canada.

HERO's North America division has experienced significant growth through paint companies and retailers over the past seven years. Mr. de Melo will be an asset in the ongoing planning and implementation of the growth plans HERO has for the future.

I.C.T.C. Holdings Corporation is headquartered in Vancouver Canada, with manufacturing operations in; Italy, India, Brazil and Canada and sales and marketing representation in over 100 countries throughout the world. Under the HERO banner, I.C.T.C. operates one of the World's largest manufacturers of a full line of POS tinting and dispensing equipment and in-plant production equipment.

New Canadian Sales Manager, Superfici

Superfici America welcomes Murat Sezen to the team as the Canadian Area Sales Manager. Murat comes to Superfici from one of the largest kitchen cabinet manufacturers in Canada. He spent the last 13 years as a plant manager with the final 8 years dedicated to finishing improvements. Prior to that Murat worked in the office furniture industry. Living in Toronto, Murat will handle all Superfici and DMC product lines within Canada. We look forward to his continued success representing Superfici America.

Sartomer Appoints Senior Account Manager

Sartomer Americas has named Chris Halvorsen and Bruce Bradley senior account managers with sales responsibility for customers in the Midwest territory.

Halvorsen brings to Sartomer more than 15 years of management experience and knowledge of the graphic arts market. Halvorsen will support customers in Illinois, Iowa, Missouri and Wisconsin.

Halvorsen most recently worked as global marketing manager at Lawter Inc., where he managed sales, marketing and product portfolios for the coatings, adhesives and ink resins businesses. Prior to that, Halvorsen held key positions in marketing, technical sales and product development at Lubrizol Corp. and at AkzoNobel. Notably, he managed several product lines including ink vehicles, waxes and pigment dispersants while product manager at Lubrizol.

Halvorsen studied business at DePaul University in Chicago.

Bradley will support customers in Indiana, Ohio, West Virginia, Kentucky and Tennessee and contribute to their success with his extensive experience in the coatings market. Bradley comes

to Sartomer from Precoat Metals, where he served as market development manager in the U.S. and Mexico. He previously held key positions with Sherwin-Williams, Becker Specialty Coatings Co. and Resinkem Ltd. Bradley holds a bachelor's degree in chemistry and marketing from Natal Technikon in South Africa.

Both report directly to Christian Petrangeli, Sartomer's Americas sales manager. "Adding Chris and Bruce to our team will improve our ability to provide customers with the solutions to meet their specific needs," said Petrangeli.

IGM Resins Adds Development, Manufacturing Expertise

New Technical Development Manager, Acrylates; New Plant Manager

IGM Resins, Inc., a global leader in the development, manufacture and supply of products and technical services to the UV ink and coatings industry, has announced the addition of Susan E. Bailey, Ph.D. and Bryan Stegall to its technical and operations team, located at the company's North American regional headquarters in Charlotte, NC, USA, which also houses its flagship acrylate manufacturing plant and R&D Center.

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Yorke Towne 40th Anniversary Celebrations

President Michael Harrison welcomed customers, suppliers, friends and family on Friday June 6, 2014, to celebrate the 40th Anniversary of Yorke Towne Supply. He traced the history of the company's move from Yonge Street to Scarborough to their new 37,000 square foot location on Reid Street in Richmond Hill, ON. Attendees were treated to gourmet food and beverages with dancing finishing off the evening.

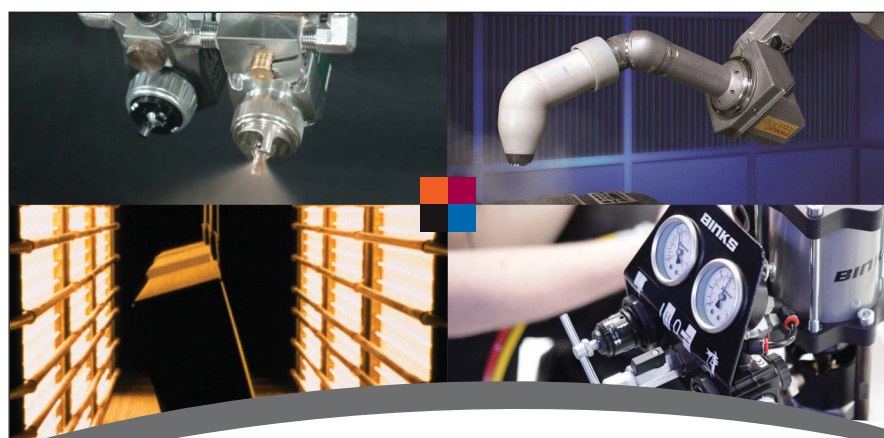
Photos by Pete Wilkinson



Manish Shah, Doorplex Industries and Sam Cesario, Yorke Town (YT).



Michael Harrison and Kimberley Wilkinson



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Dustin Barber (YT), Pat Doherty, Graco, Pablo Montoya, Akzo Nobel Wood Finishes, Paul Peterson, Graco and Anthony Briec. Phi Canada.



Kumara Vels Nadesan, Alfonso Sessa, Rudy Lall, Flair Woodworking and Lorenzo Nunno, Benjamin Moore.



Tracy Price, Mishni Kitchens, Manny Capignano YT, Marco Fogale and Al Zingon, Altima Kitchens.



Brent Stone, Emma Stone, and Karen Anne Burns, National Hose.



Wayne Mundy, Air Force 1 and Joe Nieradka, Finishing Brands.



Steve Gregorish formerly Sherwin Williams and, Michael Harrison.



Sara Hooton and Richard Wood, Rustoleum.



Mawuli Douman and Leoni Dacara, AC Custom Woods.



John Glover (YT), Ron Cooper, Kim Abel and Jeff Snyder Akzo Nobel Wood Finishes.



Riyaz Meghji, AkzoNobel, Andre Granzotto, Doorland, Louie Forrestieri and Sam Siciso, Mutlipleix Display and Jeff Pinkerton (YT).



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In the News



Ontario Paint Association takes to the Greens

The Ontario Paint Association and the Canadian Paint and Coatings Association took to the greens June 3, 2014 for a little golf and sunshine and networking. CFCM was there.

Photos by Pete Wilkinson



Lowest Score goes to Peter Stewart, John Egoff, Colin MacGregor, George MacGregor.



Lowest Mixed Score goes to Judson Lew, Pat Lennon, Liz Wight and Cathy Currie.



Kamlaish Mudhar presents Univar Closest to the Target to Rick DeMarchi.



Steve Nuyten presents to Liz Wight, the Women's Closest to the Pin and Longest Drive.

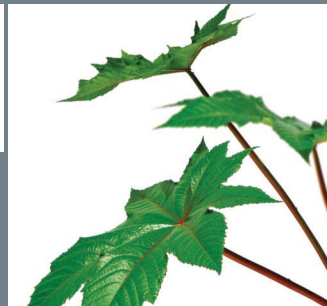


Men's Closest to the Pin, Dale Cantera.



Steve Gates wins Men's Longest Drive.

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Terri Carson, Yasmin Sayed-Sweet, Laurie Morris, Nicole Gott, Charles Chuang and Dave Folkman, Alberdingk Boley Inc.



Stephanie Egan and Scott Murray.



Marc Gagnon and Johanne Sawaya, Dempsey Corporation.



Daniel Maloney and Bob Bonham H&S Autoshot.



Roger Ducharme and Nathalie Carrier, EQMBO Enterprises.



Mike Montagano and Steve Awadalla, Allnex.



Eugene Ward, Robert Ruckle and Steve Wilkowski, Siltech.



John Woodside, Everbright and Jean-Marc Pigeon, Inortech Chimie.

RadTech 2014 Takes Chicago

The RadTech 2014, global conference and expo for UV and EB Curing, billed as the world's largest event dedicated to the educational, technical and scientific advancement of ultraviolet (UV) and electron beam (EB) technologies, was held May 12-14, 2014 at the Hyatt Regency O'Hare, Rosemont, IL. CFCM was there.

Photos by Pete Wilkinson



waves in the pond

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 Epoxy Resins & Curing Agents

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 Alkyd and Oil-Modified Urethane Resins

RÜTGERS Novares
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 Hydrocarbon Resins

Shamrock Technologies
www.shamrocktechnologies.com
 PTFE and Wax Additives

WPC Technologies
www.waynepigment.com
 Anti-Corrosion Pigments

SurFin 2014 in Cleveland

SUR/FIN Manufacturing & Technology Trade Show and Conference was held June 9-11, 2014 in Cleveland, OH at the Cleveland Convention Center. CFCM was there.

Photos by Pete Wilkinson



Jeff Hatcher, Bob Buysse and Brad Hatcher, The Dangler Guys.



Johnny Judd, Marco Latoria and Gino Latoria, Empire Buff.



Ricky Valentin, Peter van Gorp and Waasy Boddison, American Plating Powder.



Douglas Ries and Mario Facione, Accuride Corporation.



Paramjit Singh and Bob Smith, Enthone.



John Davis, Mike Simmerer and Gary Witter, Bex Spray Nozzles.



Charles Morris and Dennis Rogers Dynamix, Robert Newman and Alex Nguyen, Moore's Industrial Service.



Ross Morrison, Glen Russell, Whitney Slightham, and Rahim Kanji, Kontek Water Management.



Gary Efronson, Larry Wozniak, Paul Lomax, and Ralph Dalfonso, Fischer Technology.



Rob Rock, TTX, Howard Nicholson, MVC and Gordon Johnson, TTX.

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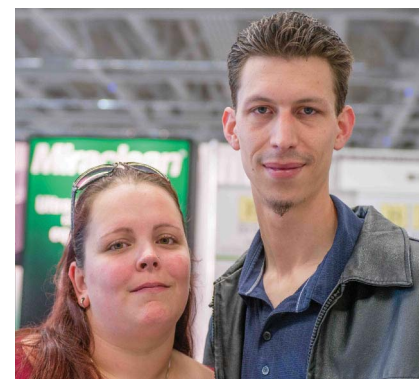
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Gerry Mironchuck, G. Mironchuck Inc.

OPCA On The Links

The Ontario Painting Contractors Association (OPCA) met on the links this summer. CFCM was there.

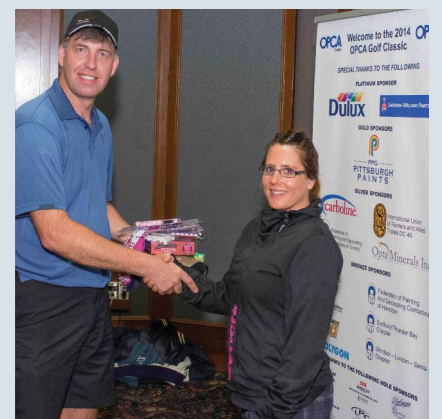
Photos by Pete Wilkinson



Best Team: Rishi Sondhi, Presenter, Adrian Day of Rescom Coatings and President of the Hamilton Federation of Painting & Decorating, Andrew Sefton, Stephen Bauld, Jim Wright.



Hole in One Contest: Steve Veroba of Benjamin Moore & Co. Limited presents to Joe Pagano.



Ladies Closest to the Pin Contest, Dave Stvartak of Painters and Allied Trades LMCI awards Teresa Warga.



Men's Longest Drive Contest: Murray Heywood and Jordan Batten



Men's Closest to the Pin Contest: Steve Peso and Dave Stvartak of Painters and Allied Trades LMCI.



Ladies Longest Drive Contest: Murray Heywood of Heywood Innovative Solution and Denise Deacon.



Continued from front cover

Sher-Wood SB Stains are available in a full range of colors and require fewer steps to achieve darker colors.

The system will be the first product offering in Sherwin-Williams' new Aurora Color System, a stainware program that provides a formula library indicating current trends.

Aurora allows customers to quickly produce their own custom stains and share those formulas across their manufacturing sites.

It provides fast color matches and allows customers to create and share custom stain formulas across multiple devices including PCs, MACs and iPads. Aurora also helps customers track inventory, calculate costs and access up-to-the-minute environmental data (such as VOC and HAPs reports) on both single and multi-step (dye, wipe and clear coat) formulas. Customer data is automatically backed up and updated as new products are introduced.

"The Sher-Wood SB Stain System, coupled with the Aurora Color System, makes it easy for manufacturers of kitchen cabinets, furniture and wood and composite building products to achieve consistent colors through repeatable formulas," says Laura Kelleher, vice president marketing. "We will continue to add to the Aurora system over the coming months to include our full range of products."

The new Ultra-Cure Waterborne UV Pigmented Blending System from Sherwin-Williams cuts production lead times from weeks to as few as three days – providing industry-leading customization and turnaround to OEMs and wood finishers. The environmentally preferable waterborne technology delivers accurate color and gloss matches while helping manufacturers meet environmental emissions con-

siderations.

Ultra-Cure Waterborne Pigmented UV finishes are blended at five regional facilities throughout North America where staff are specifically trained to ensure product consistency. High performance custom blends can be created with an order as small as one gallon.

A quick curing finish, Ultra-Cure UV allows manufacturers of kitchen cabinets, furniture, wood & composite building products, millwork or any wood product that can run flat on a finishing line to increase manufacturing throughput and maximize production efficiency.

"To our knowledge, no one in the industry can deliver pigmented UV products that match custom colors while meeting tight deadlines better than Sherwin-Williams," says Nick Bartoszek, marketing director for Sherwin-Williams Product Finishes. "This means that our customers can get their finishing lines up and running quickly, giving them a competitive edge in bringing products to market. As their finishing partner, we work hard to provide answers to their finishing challenges and deliver the industry's most comprehensive and innovative solutions."

Ultra-Cure Waterborne Pigmented UV provides a lasting, durable finish and offers excellent scratch and chemical resistance that meets or exceeds KCMA, WWI and WDMA specifications. Self-seal protection on hardwood surfaces ensures lasting protection.

oem.sherwin-williams.com

Valspar Wood offers ZENITH Waterborne Lacquer, a third-generation waterborne coating designed for finishing fine woodwork. It has exceptional film clarity that retains the natural warmth and character desired by professional wood finishers. It has been formulated with proprietary resin technology to yield a finish that is

superior in durability to conventional nitrocellulose finishes. Zenith Waterborne Lacquer is a low VOC, HAPS-free formulation that contains no isocyanate or formaldehyde. It is a coating that is not only beautiful and durable, but also reduces hazards to workers, consumers and the environment.

Zenith Waterborne Lacquer is ideal for a broad range of products including: fine residential furniture, millwork, moldings, interior doors, and picture frames. The environmentally friendly formula also yields a finish that is perfect for children's furniture and consumers that are sensitive to harsh chemicals. This product can be applied with the following spray equipment: conventional, HVLP, airless or air-assisted airless. It is packaged ready-to-spray and requires no reduction before use.

www.valsparwood.com

The Sansin Corporation, in Strathroy ON, specializes in environmentally-friendly stains and sealants. For Finishers trying to decide if they should use an oil based or water based coating with Sansin Enviro Stains, they can have the best of both worlds. Modified natural oils and resins are carried deep into the wood's cell structure using one of nature's commonplace miracles – water. As the water evaporates, Sansin bonds directly with the wood substrate, forming a tough, durable barrier that won't crack, peel or blister.

The idea of protecting wood with nature's own ingredients is almost as old as wood itself. More than a thousand years ago, the ancient peoples of Norway took resin and gums from the heartwood of trees, warmed it and applied it to their Stave Churches with a broom. Those buildings are still standing. Sansin Enviro Stains are created using the same principle. The formulas offer every possible

level of finish – from penetrating natural stains, to high-gloss barrier coatings.

Wood is a tremendously versatile material – and as long as it's protected, a very strong and durable one. Water, ultraviolet (UV) rays and fungi can all seriously damage wood. Traditional petroleum and acrylic-based coatings protect wood by forming a surface film, which repels water and UV rays. Unfortunately, this tends to prevent evaporation, trapping moisture in the wood and making it prone to decay. Sansin lets wood "breathe" more freely – dramatically improving dimensional stability and allowing wood to adjust naturally to moisture levels in the environment. Once it bonds with wood, Sansin forms a long-lasting shield that aggressively repels condensed water while allowing water vapor to escape.

As well, the paraffin waxes used to protect against water in many water and solvent-based coatings are easily damaged by exposure to UV radiation – just 5 hours of direct sunlight can reduce water repellency by over 60 per cent. Sansin's modified natural oils and resins are impregnated with special UV protectants so every exposed cell of your wood is protected. Because of their unique formulation, Sansin Enviro Stains also protect naturally against wood decay.

For industrial finishing, Sansin offers a wide range of wood products including industrial primers, warranted factory finishing systems, anti-fungal mold and decay-fighting protectants and preservatives, fire retardants, specialty finishes and topcoats.

Sansin new Eco2™ brand – a wood stain entirely derived from recycled exterior or interior Sansin products. Formulas are specifically designed to protect and beautify exterior wood surfaces such as siding, decks, timbers and millwork.

For 25 years, Sansin says it has been the only wood protection company focused exclusively on researching, developing, and introducing environmentally-friendly, 'water-borne' interior and exterior wood products and technologies that deliver outstanding color, durability and performance without the toxicity found in conventional stains. Sansin Enviro Stains use water, not oil, to deeply penetrate and protect wood naturally, from within. Headquartered in Ontario, Canada, Sansin has dealer locations across Canada and in the U.S.

www.sansin.com

The waterborne finish or stain works best depends on the design of the structure or the intended use of the product. For example, high moisture environments can generate wood moisture content ranges of 20–70 per cent, making the wood susceptible to decay – which would require a specialized preservative treatment. Or perhaps the specifications call for a finish with exceptional clarity. Waterborne finish and stain manufacturers offer products to suit every finishing need.

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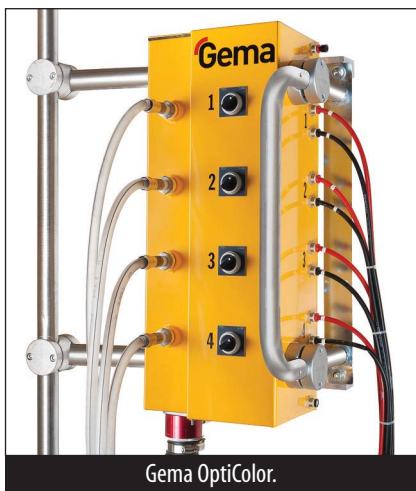
INDUSTRIAL FINISHING: POWDER COAT QUICK COLOUR CHANGE

Continued from front cover



- Efficient Design for Fast Installation
 - Booth is hexagonal - No sharp corners
 - Booth is small and can easily be cleaned from outside
 - Optimized ventilation exhaust
- Benefits:
- Lower flow rate > Less wear & higher transfer efficiency
 - Less kV and μA > Better coverage with even film-builds
 - No reciprocators > More efficient solution
 - Faster color changes due to booth size and design
 - Used for a variety of part shapes and sizes
 - Lower initial investment compared to the competition
 - Recycle more powder than competitive booths

The OptiColor allows production spraying to continue while a hopper color change is being performed. Fast color changes in seconds maximizes production, throughput and flexibility. The OptiColor is conveniently located at the operator, giving easy access for application adjustments and color



change selection. Experience fast color changes, multiple color capabilities, and risk free contamination all in a simple user friendly package.

The OptiCenter is designed for customers using automatic guns and want the flexibility to reclaim or spray-to-waste any oversprayed powder. Typically these customers are making multiple color changes in an 8 hour shift. Included in the system are the application controls, the gun mover axis controls and the fresh powder supply. The fully automatic cleaning process reduces color change times



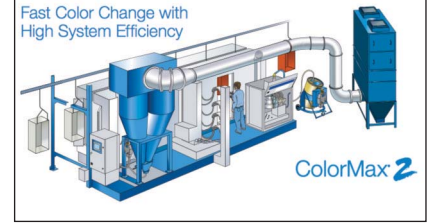
significantly and the OptiCenter is quick to install and easy to operate.

The OptiSpeeder II is the heart of the OptiCenter and combines the powder feed and cleaning functions into one compact unit. The OptiSpeeder II's improved fluidization and low maintenance pumps deliver powder to the guns using less compressed air, resulting in a softer powder cloud for improved transfer efficiency. During the OptiCenter's automated clean-

ing, the OptiSpeeder II empties the remaining powder for reuse, and purges the pumps and all of the powder hoses quickly and efficiently. Because the OptiSpeeder II is a completely sealed and closed system – this is a dustless process. The one-button cleaning operation allows one operator to complete a total color change in 10 minutes or less.

The Recovery System, Colormax 2 offers contamination-free color changes with the hinge cyclone section and easily accessible plenum to make sure there is no contamination. You can clean it and you can see it.

For Fast color change, Aerowash and AeroDeck work together to move the powder to the recycle system quickly and prevent powder buildup in the booth. Less powder in the booth speeds up color changes. The booth is constructed of patented Apogee composite material to minimize powder attraction and reduce in-process powder to a minimum level



Nordson Corporation answers the Powder Coating Quick Colour Change need with The ColorMax 2 Fast Color Change Booth System and the Encore HD Powder Spray Systems – Manual and Auto

contribute to faster color change.

Nordson says it is important to note that while people want faster color change they are not willing to compromise on

McKeever Inc. talks about the Chemcraft Mobile Product App

We traveled to El Cajon, CA, just outside of San Diego to talk with Dan McKeever, owner of McKeever Inc. and Rob Olivarez, his Finish Specialist from Chemcraft Distributor E.B. Bradley.

McKeever Inc. was founded in 2005 and produces architectural millwork, cabinetry and custom woodwork for commercial and residential customers.

"We've had a long relationship with Rob and E.B. Bradley," said Dan McKeever "They've been with us from the beginning."

"As Dan said, we've been with McKeever since about 2005, but only in the last couple of years have we been supplying their coatings," said Rob Olivarez, "We also provide them product training and technical support. Because of the Low VOC regulations here in Southern California, one of the most important things we supply is product documentation. We make sure they have what they need for the inspectors and regulators."

"It's a real challenge keeping up with all the VOC data for the products," said McKeever, "We need to have the information readily available for inspections and for submitting new project bids."



Front, L to R: Rob Olivarez - Finish Specialist, E.B. Bradley. Dan McKeever - Owner, McKeever Inc. Back, L to R: Terry Best - Sales Representative, E.B. Bradley. Colin McKeever, Technology Supervisor, McKeever Inc.



"The Chemcraft App has made it a lot easier. It's the same information as before, but now it's at Dan's or someone else in the facilities fingertips," said Olivarez.

"On new jobs, we have to show product data up front, and the mobile app makes it easy for us to pull that information up," said McKeever, "It works out pretty well for us. The app is a very good thing to have. It's easy to use, and you can find what you need quickly."

"From a distributor side of things, I really like the tools that Chemcraft has brought to market to benefit the end-user," said Olivarez "The app is a great example of that. To put product information, how-to videos,

a troubleshooting guide in an easy-to-use app is great. While this is all information that I have readily available to give to our customers, there are just times when they need it faster. It's a great tool."

To get the Chemcraft Mobile App, go to chemcraft.com/mpca on your mobile device and follow the instructions to download.

Visit chemcraft.com to locate your nearest distributor.

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high transfer efficiency, high recovery efficiency, safety, durability, application consistency and ease of use.

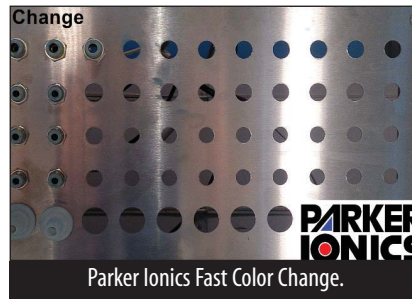
Spray-To-Waste System, Encore HD offers Ultra-fast color change in the 20 second range and has self-cleaning application equipment with up to 28 hoppers at the ready. Color change is simply done by selecting the next color and pushing a button to initiate the fully automated color change process. There are no hoses to disconnect. It is ultra-fast and contamination free color change. The Lean Cell booth is specifically designed to very quickly evacuate airborne powder during the color change to eliminate the possibility of cross-contamination. While



Encore HD

higher transfer efficiency is always a must, it is even more important with an ultra fast system since everything that goes past the part means money going away. With the HDIV technology the powder velocity coming out of the gun is reduced to an absolute minimum, which greatly enhance the transfer efficiency while also making it easier to coat recesses and corners.

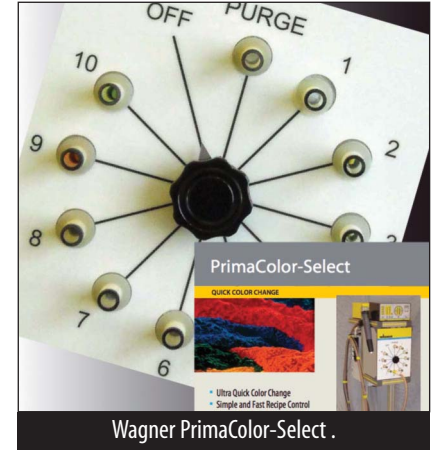
Travis Johnson, Director of Marketing of Parker Ionics says "Customers in busy job shops that are powder coating parts in a variety of colors want a quick, easy and cost effective way to change between multiple colors options to reduce down time between jobs and color changes." He adds, "Parker Ionics has developed a 'Fast Colour Change' manifold for up to twenty colours to be at the ready for the coater. No dumping and cleaning hoppers between color change. The operator simply disconnects five hoses and purges the



system using a Parker Ionics GX series manual hand gun. This process takes less than two minutes."

Parker Ionics offers a quick color change system for its Q-FLO series of booths. "This enables the operator to effectively switch between multiple color options by removing five quick disconnect hoses and installing them into the new color position on the manifold located on the inside of the booth wall," says Johnson. "Color change is less than two minutes using the purge system on Parker Ionics hand guns. Up to (20) colors can be ready using from a 5lb to 100+ pound hoppers. This is

a cost effective way to improve efficiency in a batch and job shop environment."



For powder colour changes in less than 60 seconds, WAGNER has the PrimaColor-Select. It incorporates simple, robust pneumatic control system of up to 10 powder feed systems. Including hopper fluidizing air and powder injector feed air and dosage air. The operator control panel includes the WAGNER PrimaColor-Select dial and quick connect ports for 10 colors. A WAGNER PrimaSprint manual system may also be integrated with the PrimaColor-Select unit.

The PrimaColor-Select may be equipped with a WAGNER PEM-C4 HiCoat manual gun and EPG-Sprint control unit providing highest first-pass transfer efficiency, optimum film build uniformity and powder utilization resulting in a perfect finish. The gun is designed to be very light for fatigue-free operation. HiCoat manual guns can be fitted with various nozzles for any application.

The WAGNER EPG-Sprint manual control unit combines attractive design and superior functionality. Easy handling and exceptional coating results are achieved by the electronic controller EPG-Sprint. Its central dynamic control dial combines operation of all parameters, which are divided into four functional groups. Unique cascade characteristic curve settings, Corona and Tribo compatibility along with 50 storable coating programs offer the greatest flexibility for all types of powder. Intuitive handling paired with AFC-technology provides perfect gun control. The EPG-Sprint control unit is FM certified.

Five Simple Steps to Operate:

1. Remove the quick-connect powder hose from the last color used.
2. Connect the powder hose to the purge port, rotate dial to Purge.
3. Automatic purge cycle of powder pathway including gun and powder hose. Operator blows-off gun exterior.
4. Remove the quick-connect powder hose from the purge port and connect to the next color.
5. Rotate dial to the next color and begin coating

Continuous research and development and new technologies are answering the need for quick colour change in powder coating.

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Cleaning and Rinsing are Critical

The cleaner used must fulfill its purpose of removing unwanted soils from the substrate for the subsequent processing to produce a uniform conversion coating, and therefore protect the metal surface from corrosion. A high-quality conversion coating (pretreatment) combined with the appropriate organic coating is essential for the durability of finished products. Rinse water quality and proper rinsing is also of key importance in the pretreatment process.

A coated part includes cleaning, rinsing, pretreatment and then paint.

In Pretreatment, poor cleaning and rinsing is the major cause of painted part defects.

Poor cleaning can also impact poor adhesion and painted performance, higher rework costs, higher warranty claims, process delays, customer dissatisfaction and impacts bottom-line.

Cleaning metals involves not only the selection of the type(s) of cleaners, but also the proper cleaning cycle and process equipment. Having a solid process, which meets or exceeds expectations, must be all encompassing to address soils, metals, water quality, and the process control and maintenance of the system.

To begin the cleaning process, the Finisher should assess:

- What base metals are cleaned?
- What soils are on incoming parts?

- What soils are applied to metal in-house?
- What is the production flow of the products?
- What production assemblies are pre-manufactured and stored? Do they corrode in storage?
- Do the soils age or become more difficult to remove later on?
- Is the cleaning process capable of removing all soils e.g. mill scale?
- What are the physical size limitations of your products? During welding and fabricating, are soils entrapped or sandwiched between metals?
- Do you pre-clean prior to welding? If not, how much carbonaceous residue is left on or near weldments? Is oil entrapped?
- What is the quality of the water to be used in the cleaning operation? Conductivity? Hardness? Chlorides and sulfates?
- Process mechanics and others?

The substrate, soil, water quality and cleaning mechanisms all need to be considered.

Substrates can include: Steel – CRS, HRS, and HRP&O; Aluminum – Hot Dipped Galvanized (HDG), Electrogalvanized (EG); Galvalume; Galvanel; Brass, Bronze, and others (Yellow metals).

Types of soils can include: Organic contaminants such as Oils, Coolants, Waxes, Greases, Hydraulic Fluids, Buffing

Compounds, and Mold Release Agents.

Inorganic contaminants include Metal Oxides, Rust, Laser Scale, Water Stains, Mill scale, Sanding fines, and Shop Dust & Dirt.

Difficult to remove contaminants are Silicones, Heavy High Temperature Greases, Surface Defects, Burnt on Soils, Old/Polymerized Soils and Paraffinic Soils.

Cleaning methods include mechanical, solvent and aqueous.

Mechanical involves solid such as alumina blasting, steel shot and plastic media blasting.

Solvent or wipe cleaning, flow over (sink-on-a-drum), vapor degreasing.

Aqueous cleaning includes alkaline, acid, neutral; single, multi-stage processes; spray, immersion, ultrasonic, electrolytic, vibratory and barrel. Typically it is part of a multi-stage process such as in 5-stage iron phosphating: clean, rinse, iron phosphate, rinse, seal rinse.

The choice of cleaning method is important.





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The technology behind the cloud keeps Gema out in front

Not all powder clouds are created equal – in fact, many create less-than-desirable results. Factors such as powder type, part geometry, application environment and operator skill can all affect coating consistency. Results vary widely and can severely impact your operation's bottom line.

Gema's powder coating technology has been precisely designed to do one thing – deliver the right powder cloud for any given application.

Gema's manual and automatic powder coating systems work seamlessly to merge the right cloud density with the right particle charge and air balance. Gema gives anyone the confidence to spray any powder on any part in any place.

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View case studies and videos at GemaPowderCoating.US/Cloud

Acid cleaners are used to attack problems like oxides from laser cutting and mill scale. Neutral cleaners are typically used when substrate soil is very limited. Alkaline cleaners do the bulk of the work when surface contamination is organic in nature.

Lowering the operating temperature can save some significant energy dollars.

Liquid products are easier to handle. Powdered cleaners can be formulated much stronger than liquids and will reduce your system operating cost.

Type of oil removal equipment designed for floating/skimming, ultrafiltration needs to be considered.

Galvanized and aluminum substrates can be severely etched by some cleaning products. Be mindful of what you're trying to accomplish when selecting a cleaner.

Government regulations, depending on the area, have strict phosphate discharge limits for wastewater. Phosphates may be needed depending on the type of substrate and nature of the surface contaminants (oil, grease, dirt, lubes, etc).

Cleaning processes may include Spray, Immersion, Ultrasonic and Electrolytic.

The only way to produce perfectly cleaned parts is to rinse them with good quality water. As the substrate leaves the chemical process stage, it carries spent chemical, emulsified and loosened soils and other contaminants. The rinse must remove these unwanted materials so they do not interfere with the subsequent operations or contaminate them. In the case of a reactive process (e.g. phosphating), the rinse also serves to stop the chemical reaction.

Poor rinsing leads to cross-contamination of process chemicals and visually objectionable streaks, spots, powdery coatings and particulate matter on the surface. It can also lead to field failure of finished parts, blisters, delamination and corrosion.

Rinsing considerations include:

- Conductivity / TDS, 350 ppm TDS above fresh water, 500 - 1000 ppm TDS Maximum
- Titration – 3 per cent of Previous Stage
- Temperature – 100 degrees F Maximum

A finisher must also consider counterflow; misting after chemical stage; fresh water riser after rinse stage; conductivity/TDS of drip water and water quality.

Hard water can cause scale and can react with soaps creating sludge that clogs nozzles, higher surface tension – less ability to sheet, less corrosive and less prone to foam.

Soft water results in a low tendency to scale, lower surface tension – more ability to sheet water, more corrosive, more prone to foam, high sodium content

Reverse Osmosis (RO) water is more corrosive than soft water; usually requires SS tanks and pumps, has higher purity than soft water, purity dependent on membrane cleanliness and condition.

Deionized Water (DI) is most corrosive; requires stainless steel and has highest purity. DI systems must be regenerated on a regular basis to maintain water quality.

Methods for measuring surface cleanliness include the wipe test, water break, gravimetric and the tape test. Other methods include visual, coulometric Surface Carbon, Fluorescence, Radiotracer, Scanning Electron Microscopy (SEM), Energy Dispersive X-ray Analyzer (EDXA) and Fourier Transform Infra-Red (FTIR).

When it comes to safety, a MSDS – Material Safety Data Sheet lists hazardous ingredients, defines hazards, recommends personal protective equipment and recommends accident remediation. It is a good idea to keep MSDSs in a convenient location.

Cleaning and Rinsing are most critical steps in the pretreatment process.

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Chemetall Earns Prestigious Ford Q1 Status



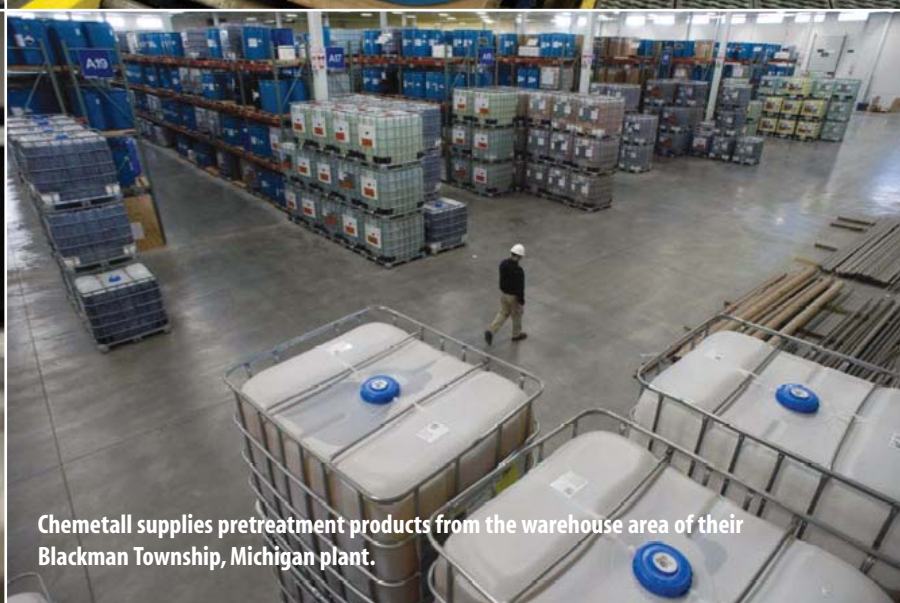
Chemetall's 25 Million Manufacturing Plant in Blackman Township, Michigan.



A Chemetall employee fills an order at the Blackman Township, Michigan Plant.



A Chemetall employee checks a mixture in the lab of the Blackman Township, Michigan plant.



Chemetall supplies pretreatment products from the warehouse area of their Blackman Township, Michigan plant.

Chemetall has earned the highly-coveted Q1 Supplier Status Certification from Ford Motor Company. The Certification recognition underscores Ford Motor Company's confidence in Chemetall's dedication to quality, delivery, service and continuous improvement programs on behalf of Ford's customers.

"I am delighted that Chemetall has been recognized with this Certification," says Ron Felber, President and CEO, Chemetall North America. "It is truly an honor to have our hard work and project dedication recognized. At every step of the way, the Chemetall community – site reps, laboratory personnel, manufacturing, trafficking, and quality control – have demonstrated excellence in their execution."

"I knew that we had already achieved excellence in the four primary areas that Ford's team looks at," says Felber. "We had competent systems, constant improvement, enduring performance and satisfied customers. As well we are fully certified."

Among those certifications are industry gold standards: ISO 9001/ISOTS 16949; ISO 14001 Certification (QS 9000/TE Certification for M&T only); Quality Operating System (QOS) and Per-

formance Metrics and the Endorsements from Key Customers.

"Ford's evaluation team requires these previous certifications. In addition we adhered to the Q1 Site Assessment Evaluation Matrix. This checklist provided objective evidence that we met all of Ford's site expectations."

Ford Motor Company will award a certificate and a flag, which will fly at Chemetall's Blackman Township, Michigan manufacturing facility. This will signify to the entire industry that Chemetall is a tier one supplier.

Chemetall has been developing, manufacturing, and supplying state-of-the-art specialty chemical products since 1909. The ISO 9001 company offers a wide spectrum of products ranging from metalworking fluids and drawing & stamping compounds to cleaners, rust preventives and surface treatment chemistries. Chemetall's integrated products, chemical management systems, process equipment, and technical service programs deliver efficient and cost effective solutions for industrial manufacturing needs.

Chemetall is a world-class specialty chemical company and a global provider of chemical technologies based in Frank-

furt, Germany. In addition to the North American headquarters in New Providence, New Jersey, other locations in the Americas include Blackman Township, Michigan; La Mirada, California; Bramalea, Ontario; and Querétaro, México.

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Flatline Finishing Solutions

Flatline Finishers are looking for solutions that deal with current and future environmental regulations as well as offer efficiency, ease, flexibility, high quality and much more. Finishers looking at investing in a flatline spray system are concerned with the following questions:

- Can the spray machine produce a high quality finish?
- Can the spray machine spray various shapes and sizes?
- Is the spray machine easy to clean and maintain?
- How easy is it to operate?
- Is the machine flexible in terms of spraying different coatings?
- Does the supplier have a responsive Service Department and an extensive Parts Department?
- Does the manufacturer have a Laboratory in North America for testing?
- Can the spray machine out produce sprayers in a manual spray booth?

Manufacturers of flatline finishing systems are answering those needs.

Cefla Finishing offers the Target/iBotic K robotic spray machine designed for spraying coatings and adhesives by using 2 - 5 guns based on the specific application. It can work in robotic mode or in standard oscillating mode. The movement of the arm is driven by brushless servomotors,



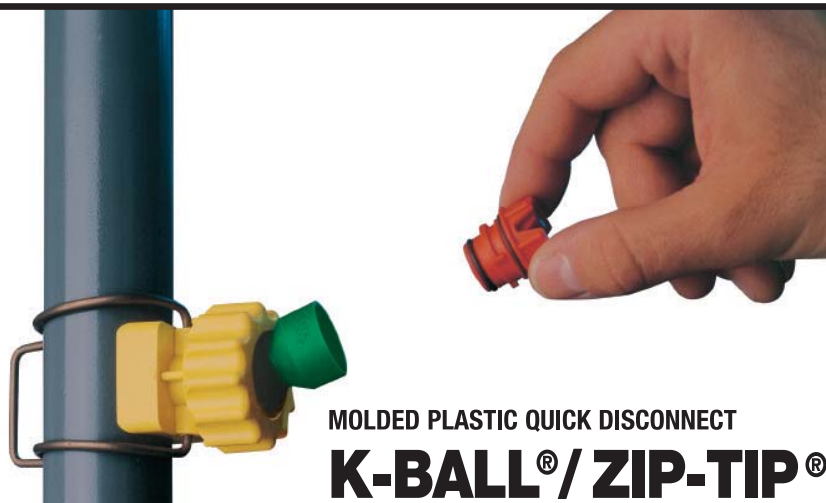
Cefla Finishing Target/iBotic K robotic.

a rack and pinion drive and is designed for superior accuracy ensuring optimization and a reduction of waste.

The scanner at the infeed of the Target/iBotic K automatically detects any shape, frame or item including very complex parts resulting in a high quality finish.

Finishing Brands (BGK) offer Flatline Brake Pad Systems with a modular design to meet individual production specifications. Systems are available with up to 14 cure lanes (70") wide and are capable of handling production rates of 10 to 100 pads per minute. Efficient in-line oven cures pads in less than two minutes with precisely zoned temperature control. Typical system components include: Infrared

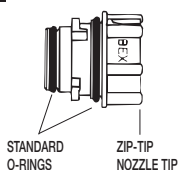
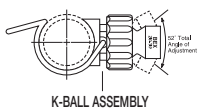
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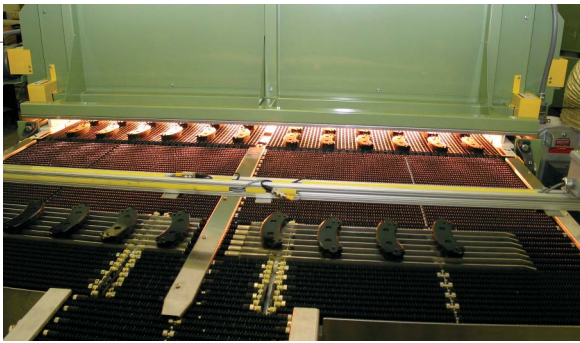
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Superfici America COMPACT PLUS/R Spraying machine.

Superfici America, Inc. offers the COMPACT PLUS/R Spraying machine with double arm reciprocator, compact and inexpensive, achieves all the advantages of automatic spraying and makes them affordable to small and medium-size enterprises. Production in two steps achieved by the double arm reciprocator, and by the pressurized cabin with double filtration system at the air inlet and wide filtering roof inside the cabin. Easy use and consistency in the production quality is achieved by the software OPTISPRAY, which controls the spraying parameters. The lacquer reclaiming unit reduces costs with perfect belt clearing and the eventual re-use of the lacquer collected by the system.



Venjakob's Ven Spray Smart.

Venjakob offers the Ven Spray Smart. This machine has a low cost with a small footprint yet large production capacity. It has an environmentally friendly, paint recovery system. Most types of paint can be reclaimed. It can be used with both water based or solvent based applications. The Ven Spray Smart can also be used with both belt systems installed at the same time; or with just the reclaim belt OR just the paper belt conveyor system.

Working width: 1300 mm Working height: 920–960 mm Feed speed: 2–4 m/min. Exhaust air volume: 7000 m³/h. Supply voltage approx.: 9.6 kW/12 A.

Finishers are having their needs met by manufacturers of the flatline finishing systems.

Editors Note: Companies contributing to this article can be reached at: www.ceflacanada.com www.finishingbrands.com, www.superficiamerica.com, www.venjakob.de

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Anodizing Trends, THEN AND NOW

BY FRED MUELLER, CEF

Anodizing is an electrolytic process that creates a thicker metal oxide surface than natural processes (exposure to oxygen in the air and water) can produce. Practical anodizing of aluminum and aluminum alloys is over 90 years old. One of the first commercial uses for anodizing (chromic acid process) was protecting aluminum seaplane parts from corrosion. This early chromic acid process resulted in a British Defense Specification 'DEF STAN 03-24/3' that is still in use today. Changes to this anodizing process soon produced a sulfuric acid anodizing process that was patented in England by Gower and O'Brien in 1927. Organic acid (Oxalic Acid) anodizing was patented in Japan in 1923. Anodizing was being used around the world in the mid-nineteen twenties for corrosion protection for military, commercial and particularly for architectural applications.

Sulfuric acid based solutions soon became the most popular anodizing elec-

trolyte and still are today. The process name comes about because the part/component becomes the anode during the formation of the electrical circuit. Why anodize? As a general rule, anodizing has two main benefits; it increases the corrosion resistance and wear resistance of many different metals (Aluminum, Zinc, Magnesium and Titanium are the most common). Anodizing has another benefit: it lowers the surface energy of metals forming a more ordered metal oxide system and this provides better adhesion for paints and other organic surface finishes.

Most industries that are this mature are not experiencing the technology innovations that the anodizing industry has seen over the last 25 years.

The first major trend we'll look at was encouraged by increased environmental concerns. LEED, or the Leadership in Energy & Environmental Design, is a 'Green' Building Program that acknowledges and certifies state of the art building strategies and practices that save energy and natural resources. For the aluminum

architectural area this means recycling about 20 per cent used aluminum into the new product. This increases the impurities in the aluminum ingot used to make the architectural products used in new construction. Standard pre-process cleaning using a traditional caustic etch made it very difficult if not impossible to maintain a uniform anodize colour from top to bottom across the part, as well as from part to part. The industry solved this problem by replacing the caustic etch with an acid etch. The acid etch imparts a flat/matt surface that hides the colour variations caused by the increased level of impurities. This different etch provides a more uniform surface that makes the environmental goals possible.

The second trend is also in architectural anodizing. The use of electrolytic colouring of anodic coatings has made a huge impact in architectural anodizing. This is a two - step colouring process that begins with a standard anodized layer formed on aluminum and its alloys. After anodizing, the part to be coloured is con-

voyed to a second processing tank containing a metal salt. Overwhelmingly the metal used is tin (forming colours from champagne to bronze and even black), but other metals can be used like nickel (colours are similar to tin), copper (produces reds), and silver (can produce yellow thru gold). When large coils of aluminum are being anodized and coloured, Cobalt is used instead of the tin. The coils move so quickly that process limitations favour the use of Cobalt. AC current is used to deposit the metal oxide colourant at the bottom of the pores present in the anodic aluminum film. As Charlie Grubbs (a consultant to the light metals industries) points out, there are many advantages of this technology over the older integral colour anodizing. Unlike the integral colour process, most alloys can be coloured with no difference in the colour caused by the variations within alloys. Chemistry and operating costs are lower and have a much wider operating window. The two - step process offers the

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While not in the same realm as Big Foot and other urban myths, there are three other areas of technical improvements that may or may not help you advance your process.

weather fastness needed for architectural applications.

The two – step process is not the only way anodic films can be used to achieve a wide range of cosmetic effects. Colour can be accomplished either with thick porous coatings that can absorb dyes or with thin transparent coatings that add interference effects to reflected light. Patterns of colours can be formed using a solid base colour to which you apply a different colour in a pattern (can look like a spider web) or a fading maze of two or more colours. (Have you seen Paintball guns lately?)

While not in the same realm as Big Foot and other urban myths, there are three other areas of technical improvements that may or may not help you advance your process. If you have steadily advanced your anodizing skill set, these improvements may not be new to you or buy you much improvement over what you are doing today.

Suppliers of anodizing equipment estimate that 50 to 75 per cent of all agitation systems in use today could be improved with a few modifications. Even air supplied in the form of small bubbles and/or micro-bubbles can help prevent burning and/or powdering. Too often insufficient air is the real cause of many of the problems we blame on solution chemistry.

Micro Bubbles are created using micro-porous tubes. They can be made of several plastics, including polyvinyl chloride (PVC), polypropylene (PP) and Teflon. If price is the major concern, PP porous tubes work pretty well in anodizing applications and are not too expensive. A note of caution, micro bubbles often cause excessive foaming problems with some of the organic additives used in modern anodizing formulations. You will need some help to specify the pore size and tube dimension when ordering the porous tubes. You can Google suppliers.

The build-up of dissolved aluminum contamination is a major contributor to quality problems in an anodizing bath. Employing bath purification methods eases/controls this buildup and allows for the production of a consistent, reproducible oxide coating that is so important to consistent colouring. There are two main methods used to remove the ionic aluminum.

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the metal finishing industry and can be used for the recovery of a variety of metals. These systems have been installed around the world in a variety of applications that use sulfuric, hydrochloric, and nitric acids. As to costs, do your homework.

Diffusion Dialysis - is a membrane separation process. It can be used for the separation and recovery of acids from our aluminum containing sulfuric acid based anodizing solution. Diffusion is the movement of a material from an area of greater concentration to an area of lesser concentration. During the recovery of acids with diffusion dialysis an anion exchange membrane is placed between a

flowing water stream and a flowing acid containing dissolved metals. The acid passes through the exchange membrane while the aluminum ions do not pass through and are removed from the anodizing solution. Diffusion dialysis has a high initial cost and may cost more to operate than the resin sorption technology. Do your homework.

A conventional manual DC rectifier is suitable for all forms of anodizing. But why stop here? The first step in modernizing the rectifier would be to add an automatic ramp control. Next up, anodizing was a voltage driven art years ago and many anodizers still use the voltage

method. But, many anodizers are using current and not voltage to anodize their parts to great benefit. So what's the state-of-the-art? you ask. Some people feel that pulse anodizing offers huge advantages. These new rectifier waveforms are proven in production on commercial, military, and aerospace applications but I can't tell you which one works for you. Do your homework.

I'll close with the following. Anodizing can fill a wide variety of Industry needs. The suppliers are still finding ways to make it better and faster. This has led to a wide variety of proprietary solutions and equipment in ever increasingly complex variations. Which is why the military and industrial standards are classifying the coating properties rather than by process chemistry.

Fred Mueller, CEF, is the Corporate Quality Manager at General Magnaplate Corp. Linden, NJ 07036.



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Rectifiers, Pulse Plating, Waveforms, Power Supplies

A DC power source is required to operate any plating or anodizing operation.

There are several low cost ways to obtain and control plating power requirements. Rectifiers, designed specifically for the job, will enable the experienced plater to reach very tight tolerances and controls, and are much more convenient than the bulb method. Pulse and DC Rectifiers have their different suitability.

Rectifiers have supplied power for electroplating and anodizing processes basically the same way for 50 years. Today's rectifiers pack more reliability and power into smaller footprints and are "smarter", more computerized.

Digital controls can regulate amperage and voltage with more precision than any operator even could. The electronic controls make it possible to automatically

ramp current up and down and start and stop precisely and do it the same way each and every time.

AMPS THE 25 AMP & 60 AMP RECTIFIER:

Powered by 110 volts, these rectifiers will plate continuously and are ideal for the smaller workshop with a higher output. The 25 amp rectifier will plate up to 20 sq.

inches of chrome, but will cope with all other plating tank requirements.

The 60 amp machine is capable of plating smaller items with chrome up to approx. 50 sq. inches in total surface area.

THE 250 AMP PLATING RECTIFIER:

This unit will plate chrome parts up to approximately 200 sq. inches in surface area. It is not suitable for chrome plating small parts less than 20 square inches, or for any other type of small item plating, because the lower end of the 'tuning' range is simply not fine enough to give you an accurate result. For these parts use the 25 amp rectifier.

The only disadvantage of rectifiers, is their cost. For the occasional plating job, the initial cost may be prohibitive. So, an alternative low cost method is to use light bulbs to control a battery. See the next section on "Controlling the Power".

THE 6 & 12 VOLT BATTERY:

Some manage to plate using a 6 or 12 volt battery, or charger, and bulbs as a current control.

Giving pure 'ripple free' DC current, these batteries are the obvious preferred choice of power source, and are able to supply high amperage for a short duration, ideal for chroming small parts.

As the usual current requirement is 2-6 volts for most plating jobs, it is preferable to use a 6 volt supply. By using 12 volts, we have more difficulty in disposing of the additional heat. Much larger rheostats are required. So, it makes more sense when designing your system, to use the correct voltage in the first place. 6 volts is a preferred voltage output for all power sources, except LCD Anodizing.

PULSE PLATING SOFT GOLD AND COPPER

Pulse plating allows for cost savings in precious metal plating. Pulse gives more consistent distribution, yielding greater economic paybacks because of the high price of gold. History points to soft gold plating as the first noteworthy use of pulse plating. Pulse and pulse reverse copper deposits are so fine that the Integrated Circuits (IC) chips use electroplated copper for the lines. Pulse can help prevent photosensitive resists from breaking down. (Remember that pulse helps the low-efficiency bath chemistries tremendously by bumping up the efficiency.) Pulse creates the conditions for less hydrogen loss in the solution and superior distribution (shorter plating times equal less exposure to a more basic solu-



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tion) by plating more efficiently.

Different waveforms work great in Electro-polishing. When you Electro-polish with DC a viscous layer is formed on the surface of the part and the parts must sometimes be rinsed to remove the viscous layer for the smoothing action to continue. With pulse the viscous film has time to "relax" and is diminished reducing the time spent rinsing. The pulse is timed so that as the surface peaks are exposed by the film relaxing, the current returns to lower the highest/exposed peaks without effecting the valleys. This effect works to smooth the parts better and faster than direct current.

Pulse works extremely well with hard chromium yielding deposits that are denser, harder, and more wear resistant in less time. Because the deposit generated by pulse is crack-free, very smooth deposits can be produced. The smooth deposit, in turn, creates a very hard chrome layer. An interesting application is the use of pulse for plating engine cylinders. By using pulse at the beginning of the plating cycle, a hard chrome layer is placed next to the base metal. Then, in order to give oil a place to cling, the waveform is changed over to DC to produce micro-cracking. This combination of Pulse and DC can be used to get the best of two worlds out of the same plating bath chemistry.

Hard coat anodizing and chrome plating are the two most successful, large-scale (based on the size of the rectifier)

commercial applications. Chromium III chemistries that are additive free can provide comparable thickness and hardness to chromium plated from hexavalent chemistry with the use of modified waveforms.

In anodizing different waveforms have two principal benefits: 1) greater thickness because you can use higher current densities without burning and 2) shorter process times. It's possible by using pulse to form an oxide film with a higher average current density, and this leads to a shorter anodizing time. The off time leads to the reduction of the heat generated during the formation of the aluminum oxide film at the surface of the part, which in turn causes less of the anodized layer to be lost to the solution/dissolved. In Europe the anodizing pulses are as short as 100 milliseconds, while in Japan the "Y process," developed by Yokoyama, has duration of 5 to 100 seconds. Because the "Y process" pulse is so slow,

several seconds, a simple inexpensive switching device can be used instead of a pulse rectifier. Pulse waveforms work remarkably well with high copper alloys, such as 2024.

COPPER, NICKEL, TIN

Pulse reverse plating for printed circuit boards is the hottest area in bright acid copper for fine lines, small geometric and recessed areas. The bath chemistry has been matched to fit with pulse reverse. It is now possible to plate two to three times the amount of copper in the hole than on the lines. A back-pulse in the range of 1/10 of a millisecond at three times the amplitude or current of the forward pulse is the key. The back-pulse keeps the holds from dogboning and removes copper from the lines faster than from the holes. Typical plating time for PCBs is 45 to 120 min. Pulse reverse, or periodic reverse, plating has consistently been found to produce a smoother and harder deposit

than pulsed current plating.

Pulse nickel plating works about the same as for plating copper. It can provide a very uniform deposit over extremely complex shapes (electroforming) and significantly reduces the plating time. Pulse can control the alloy deposit from Nickel/Iron bath chemistry better than just watching the amount of metals (nickel/iron) in the solution.

In tin-lead plating, pulse is stuck in the middle because of economics. It works best, however, with the higher tin alloys yielding finer grain.

Multiple pulse rectifiers each one optimized for a single metal can lay down alternating layers of two or more metals from the same solution. You can then use heat to get the desired alloy by diffusion.

Rectifiers, both DC and Pulse have computer controls and new waveforms. New rectifiers are easily justified when they have a strong economic return on investment and cost savings.



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The Importance of Fillers

In choosing filler for a paint or coating, both the demands of the desired result and the cost must be considered. The job of fillers in paint and coatings is to enhance the efficiency of the more costly color pigments, reducing the amounts needed to achieve the desired color, and filling up the volume in the paint, which therefore reduces the need/use of resins and/or solvents.

CHEMICAL NATURE

The performance of fillers in a paint or

coating depends on its basic chemical nature, as well as its particle size and shape, surface chemistry, color, and whiteness or brightness (both dry and wet). Most coatings and paints have a combination of different fillers to achieve the desired balance of application, appearance, durability, and cost.

Such is the case with mineral fillers used to improve properties of the paint or coating. The following must be considered:

- Mineralogy (such as chemistry, crystal structure, Mohs hardness)

- Oil absorption, brightness, pH, chemical inertness, refractive index, purity, soluble salts
- Particle size and particle size distribution
- Particle shape and aspect ratio
- Volume fraction in the matrix (PVC and CPVC)

pH is a function of the metallic ions in the structure. Aluminum makes the mineral acidic. Calcium, potassium, barium or sodium makes the mineral alkaline.

Some minerals, such as calcite or serpentine are soluble in acids and can't be used in coatings that have pH <7.

The Mohs scale of mineral hardness characterizes the scratch resistance of various minerals through the ability of a harder material to scratch a softer material. Talc is the softest mineral and diamond is the hardest. Harder minerals will have better scrub resistance and better burnish resistance. A drawback is they will be more damaging to process equipment than softer minerals.

The oil absorption of a mineral depends on how finely it is ground. The denser the mineral, the lower the oil absorption. The oil absorption affects the viscosity of the paint and the gloss.

Water-soluble salts in certain minerals can adversely affect corrosion resistance and exacerbate blistering. Exterior paint frosting and chalking also are a result of soluble salts.

Dry brightness and color-in-oil of a mineral will affect how the mineral appears in a coating. A mineral can have excellent dry brightness, but turn color when put into a resin. Color-in-oil can vary from cream to gray or even green depending on the mineral. The color is usually an effect of minor impurities.

Refractive index is a measure of how light is bent when it passes from one medium to another. The higher the refractive index, the more the light is bent and the greater opacity results. Rutile TiO₂, for example, has a high refractive index and gives good opacity to coatings.

Most mineral fillers have significantly lower refractive index and don't give opacity, but they can be used in conjunction with TiO₂ to achieve opacity at reduced cost. Some minerals, such as amorphous silica, have refractive index the same or lower than the resin and will be invisible in the dry film. They can be used to reduce gloss of a clear coating without creating haze.

The particle size of a mineral can be expressed in several ways depending on the method by which it is measured.

Common methods of measuring particle size are a Hegman gauge to determine particle fineness, screening, sedimentation methods and laser light scattering methods. Each method will yield a distinct result.

When comparing data of different minerals, be sure that the particle size distributions are measured the same way.

Mineral fillers affect many coatings properties such as durability & flexibility, scrub resistance, color uniformity, weathering resistance & tint retention abrasion resistance and more.

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Mica is a platy mineral used as a filler in specialty coatings. Fine dry ground mica is used in joint compounds and texture paints for mud crack resistance.

thing such as white ceramic microspheres with a semi-transparent fine particle size, but with high strength.

Natural calcium carbonate (GCC) is one of the most abundant filler minerals.

It forms in several crystal habits (different shapes). Shapes include blocky (chalk), scalenohedral (calcite), short needle acicular (aragonite).

Calcium carbonate has high brightness, low oil absorption, can be ground to ultra fineness. It can be inexpensive.

Calcium carbonate is soft and unstable in acidic conditions.

Synthetic precipitated calcium carbonate (PCC) is made by calcining poor quality calcite or lime, dissolving in water to make slaked lime, reacting with CO₂ then precipitating a fine high brightness product. PCC is used for higher brightness, finer particle size, lower abrasivity and higher purity.

Talc is a platy magnesium silicate mineral. Its properties include high oil absorption, softness and high brightness. The use of talc in coatings contributes to gloss control, TiO₂ spacing, anti-settle, sandability of primers, inter-coat adhesion and corrosion/blistering resistance.

Nepheline syenite is an irregular shaped natural mineral mix of feldspars and nepheline. Its crystal structure is deficient in silica. It is used in various kinds of paints and coatings where it imparts good scrub resistance to flat paint and good exterior weatherability (tint and gloss retention and resistance to chalking and frosting).

Natural silica is the most abundant mineral family on earth. Common varieties include quartz, sandstone, silica sand, tripoli, opal and novaculite (microcrystalline quartz). It has low oil absorption, good brightness, high purity, and excellent abrasion resistance. Caution must be observed in its use due to health issues related to crystalline silica

exposure.

Natural barium sulfate, known as barite, is a high brightness, high specific gravity, low oil absorption inert filler. It finds use in powder coatings because of its high specific gravity, good brightness and low oil absorption.

Mica is a platy mineral used as a filler in specialty coatings. Fine dry ground mica is used in joint compounds and texture paints for mud crack resistance.

Fine wet ground mica is used in exterior latex paints for tint retention and weatherability.

Diatomaceous earth is a form of silica formed from skeletons of microscopic plants and animals (diatoms), which yields a wide range of interesting shapes and sizes.

It has very high surface area, high pore

volume and is very hard.

Its uses include gloss control and scrub resistance of interior flat paints. One must be careful when using diatomite as over grinding will destroy the unique crystal shapes, defeating the purpose of using it. Addition late in the

paint preparation with low shear mixing is recommended.

Fillers are engineered to help the formulator and paint and coatings manufacturer, reduce costs, increase solids, enhance properties and improve processability.

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Combating Graffiti

Anti-graffiti coatings prevent graffiti paint from bonding to surfaces helping toward the billions in cleaning costs from vandalism. Innovations in the area are ongoing as the anti-graffiti coatings being developed can be the paint itself, or a clear coat added on top of existing paint or building facades. Different coatings give different benefits and disadvantages depending on the substrate and the severity of graffiti.

PERMANENT AND SACRIFICIAL

Anti-graffiti coatings can be invisible to the naked eye. There are two different categories of anti-graffiti coatings.

Sacrificial coatings are applied to a surface and then removed when graffiti is applied. The surface underneath will be left clean and a new sacrificial coating can be applied. Sacrificial Anti-graffiti coatings are graffiti removal without chemicals. Low pressure hot water is what is needed for graffiti removal – No chemicals required. These are for use in environmentally sensitive applications or where chemicals could damage a substrate. Formulas tend to be clear, matte sheen, non-yellowing with minimal change in the look of a building allowing for versatile protection on concrete, stucco, EIFS, brick, wood, metal, plastic and painted surfaces. Spray, brush, roll application. A sacrificial coating forms a clear coat barrier over the wall or surface being protected. If the surface is vandalized the coating can be removed (sacrificed) using a high-pressure washer taking the graffiti with it. The coating then must be reapplied. The materials used to make a sacrificial coating are usually inexpensive optically clear polymers such as acrylates, biopolymers, and

waxes. These polymers form weak bonds with the substrate to allow for easy removal.

A semi sacrificial coating known as a safety shield acts as a penetrating sealer on the wall or surface protecting the surface pores. If the surface is vandalized the coating can be particularly removed using a combination of graffiti removal solvent and high-pressure washer. The anti graffiti safety shield is generally reapplied every second attack. While it is possible to use only pressure to remove coating, this will cause additional surface erosion.

Permanent coatings are often more expensive than sacrificial coatings, but if used appropriately only have to be applied once. These create a protective surface that will not let spray paint bond. After the surface has been vandalized, often all that is needed to remove the paint is a simple solvent and some manual labor. The underlying surface and the protective coating will remain undamaged.

Some of the types of permanent coatings include those based on polyurethanes, nano-particles, fluorinated hydrocarbons, or siloxanes. Polyurethane coatings are useful because of their barrier properties. High chain stiffness and high crosslinking density reduces the ability of the polymer to swell and absorb graffiti paint. Fluorinated coatings are some of the most effective in the field of graffiti prevention. Fluorine is the most electronegative element, meaning that it shows very little affinity for the electrons of other elements. When fluorine is attached to a surface it will decrease surface energy at the interface, minimizing the contact with the graffiti paint. For the same reason

TAKING IT TO THE SOURCE

In the US spray paint manufacturers themselves are taking the graffiti matter in hand.

The Graffiti Resource Council based in Washington DC, USA, formerly the National Council to Prevent Delinquency aims "to prevent graffiti vandalism and provide creative solutions that promote graffiti-free communities."

The organization provides a graffiti newswire, an "Ask the Experts" service in which technical experts field individual questions, and a Marketplace of anti-graffiti products and services.

The nonprofit Council is a 501(c)(6) organization under the umbrella of the American Coatings Association, representing paint and coating manufacturers. The Council's work is funded by members of the aerosol coatings industry.

Spray-paint makers have been trying to develop anti-graffiti strategies that do not involve restrictions and bans on product displays and sales.

The Council is careful to distinguish between illegal graffiti—unlawful marking of someone else's property without permission—and legitimate street art.

Rather than lock up products or limit sales, the Council has pursued a program called Responsible Retailing. It involves educating store employees, "strategic placement of signs," and "prudent display of spray paint."

The Council has partnered with retailers to reduce shoplifting of graffiti tools and to stop illegal sales.

The new GRC says it plans to:

- Expand its efforts with the business community by offering resources that highlight innovative methods of graffiti • prevention through new technologies;
- Partner with communities in support of urban art to beautify neighborhoods; and
- Provide opportunities for communities to benchmark their efforts and learn from other successful programs.

that a Teflon-coated pan repels both water and oil, a fluorinated coating will repel water and oil-based paints. These coatings also have the added benefit of being chemically inert as well as very durable. Unfortunately, they are also expensive and can be difficult to apply.

Silicon based coatings are hydrophobic, which means the surface repels water. This reduces the effects of photo-oxidation of surfaces.

In nanoparticle based coatings. Silica particles are formed using the sol-gel method. The resulting silica particles have both reactive (Si-OH) and nonreactive (Si=O) groups on the surface. The reactive groups provide locations for further chemical processing, which allow the change of the surface properties of the nanoparticles. For anti-graffiti coatings, hydrophobic and oleophobic (oil-fearing) ligands are grafted onto the silica nanoparticles. Hydrophobic ligands are non-polar molecules such as hydrocarbon chains. Oleophobic ligands consist of polar mole-

cules. Normally these two different types of molecules would phase separate in solution, for the same reason that water and oil do not mix. By chemically grafting the ligands onto the silica particles, this effect is counteracted. The effect is a coating that shows an equal dislike for both water-based and oil-based paints.

INDUSTRY EXAMPLES

Bayer MaterialScience has long been a fixture in the coatings market and offers coatings manufacturers waterborne polyurethane dispersions and polyisocyanates with ultra-low VOCs and low odor for use in anti-graffiti coatings. These raw materials enable the creation of high-durability, low odor and low sheen graffiti-resistant coatings for use on concrete, masonry and steel architectural and transportation applications.

PPG has a new coating system that helps combat graffiti. Duranar GR (graffiti resistant) and Corafon GR clear coats protect roof and wall panels by providing a graffiti resistant barrier that can be wiped clean in seconds with Duraprep Prep 400 graffiti remover by PPG. This trio of PPG products helps fight spray painted graffiti and also eradicates pen and marker inks scuff marks and much more. The products still deliver brilliant colour and lasting durability.

VANDLGuard TEN Non-Sacrificial Anti-Graffiti Coating by Rain Guard is a three-coat system that requires two coats of VANDLGuard TEN and one coat of VANDLGuard Finish Coat. This system provides a tough and durable graffiti-resistant finish. This is a cross-linking co-polymer material coating that dries clear (non-yellowing) with a low-luster sheen. Protects a variety of interior and exterior vertical surfaces from permanent graffiti staining and damage. Will protect surface from graffiti defacement caused by commercial available spray paints.

Research is ongoing when it comes to anti-graffiti agents and coatings. Coatings manufacturers take the matter very seriously and are providing solutions.

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PAINT RECYCLING in Ontario

By GARY LEROUX

On July 17, 2014 the Board of Waste Diversion Ontario (WDO) could not arrive at a final decision on the paint industry's application to establish a new program operator for paint recycling in Ontario. In concert with the Canadian Paint and Coatings Association (CPCA), Product Care made a formal application or what is known as an Industry Stewardship Plan (ISP). The formal application was made to WDO in September 2013. The WDO Board was forced to suspend their consideration of whether or not to approve the application as the new Minister of Environment, Glen Murray, had indicated that he wanted further consultations on the application and issued a Ministerial Directive to that effect at the last minute. This occurred despite the extensive application process, which required Product Care to comply with comprehensive ISP Guidelines established under the Waste Diversion Act (WDA). This process included hundreds of consultations and took more than a full year to complete at a cost in excess of \$500,000. The extensive public and private consultations with all the stakeholders fully addressed the main concerns. Industry remains hopeful that when the six items noted in the Ministerial directive are addressed and the new Minister is fully apprised of the benefits of this approach per the established process, the ISP will proceed.

The reason the ISP option exists in the Waste Diversion Act is to provide regulated materials like paint, under the Municipal Household and Special Waste (MHSW) program, to take responsibility for their own waste stream. In this case more than 90 percent of the paint stewards, primarily CPCA member companies, signed a formal Letter of Intent to Participate under a new program operator. Once the ISP application is approved, paint stewards can transition to Product Care as the program operator and allow Stewardship Ontario to continue its programs for the Blue Box and the remaining stewards in the MHSW program. It is clear that paint manufacturers (the designated stewards under the WDA) representing a large majority of Ontario paint stewards wishes to proceed with the ISP ensuring they can enhance extended producer responsibility in the coming years. It was clear from our extensive analysis – as well as that of Waste Diversion Ontario - that this approach would lead to better overall governance, increased transparency and, most of all, better results for waste reduction in Ontario. Increased waste reduction is in fact the primary objective of the

Waste Diversion Act.

The paint industry fully understands the Minister's desire to look at possible new legislation for recycling, but this should not impede progress on a better approach for post-consumer paint recycling now. As many know, there was a new Waste Reduction Act being considered in the Ontario Legislature over the past year, while the paint ISP and others were being developed, but it did not stop the progress of the ISP application as it is permitted by the Act. Whatever legislation is passed in future, program operators in all industries will have to fully comply as they have done in the past in Ontario and other jurisdictions in Canada. It should be noted that British Columbia, with a population of 4.6 million, had an impressive paint recovery rate of 6,000 tonnes per annum under Product Care, while Ontario, with a population of 13.6 million, had a recovery rate of 9,000 tonnes under Stewardship Ontario. This is testimony to the success of Product Care over the past 20 years in delivering excellent results for post-consumer paint recycling throughout Canada. CPCA looks forward to a better post-consumer paint-recycling program in Ontario in the near future, one that is better for all stakeholders: consumers, government, service providers and industry.

WDO is now in the process of addressing the six concerns raised in the Ministerial Directive of July 22 and much of that information will be posted in Ontario's Environmental Registry should the general public have an interest in the ongoing deliberations related to the ISP. The stakeholders who may or may not be directly impacted have all seen the information before and have been consulted on a number of occasions. The industry looks forward to having the six issues raised by the Minister fully addressed. For the stewards who may be wondering about the issues raised, below is brief note on the items mentioned:

1. "Affect any transition of the programs from the WDA, to the new framework": Whatever the 'new framework' for future waste diversion, current programs still have to be operated effectively by the stewards or the IFO or ISO designated to operate them on behalf of the stewards. It does not diminish what is prescribed under the current Act, which governs the way things are done now and for the foreseeable future, including the option of establishing an ISP for specific waste categories.

2. "Affect the collection, recycling and reuse of waste in Ontario": Any new ISP is

required to do 'as well or better' as current programs for waste diversion, per the requirements under the Waste Diversion Act. Product Care's paint ISP will positively affect all three areas and thus the *raison d'être* for the paint industry pursuing the ISP in the first place. The 25 clauses in the ISP Guidelines are meant to ensure collection, recycling and reuse of waste is fully addressed in the program plan BEFORE an ISP can be approved.

3. "Affect consumer uptake and protection": It is unclear what this really implies as consumer uptake will require more communication first and foremost. Given the fact that the paint ISP will lead to better waste diversion results consumers will very likely want to bring back more left over paint, as success can breed more success, if properly communicated. The program plan has extensive communications plans as required under the ISP, which is better than provided under the

current program operator. Plus, the paint industry stewards/producers will be more committed to ensuring success once they are clearly responsible for running their own specific program for their waste material under Product Care. As for protection, Product Care has operated paint recycling programs for 20 years in Canada without incident and no other operator in Canada, or any other country for that matter, has a similar track record. In fact the current, successful PaintCare program in the United States is modeled after Product Care's approach. Uptake and protection will be achieved in collaboration with all stakeholders and extensive acrimony that currently exists in Ontario's waste diversion sector will dissipate.

4. "Affect fairness in the post collection marketplace": Fairness in the marketplace has always been a key concern for waste diversion in Ontario and addressed from the very beginning in the paint ISP

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application. This constitutes one of the largest parts of the proposed paint ISP program plan and one that had extensive consultations with stakeholders in an effort to assuage their concerns. If there are specific concerns that are un-addressed, those with the concerns need to come forward and make their case. If there are any, they have not been made known to the paint industry or the ISP proponent at this time.

5. "Adversely affect the environment and public health": It is unclear if the MHSW program has been overly concerned with this in the past, but put simply, one can of recycled paint achieves this goal. The more paint recovered and kept out of landfills the more environment and public health is enhanced. It should be noted that all paint and coatings products on the shelf today have cleared many regulations re: health and environment, well before getting to the consumer at the point of sale. This continues to be a preoccupation of the federal government under the Canadian Environmental Protection Act. Both Health Canada and Environment Canada are working hard, with all industry sectors, on the Chemicals Management Plan assessing all chemicals in commerce with a view to banning the highly toxic. Those that are determined not to have a high risk

with respect to human health and the environment, proceed with risk management approach that includes regulations, pollution prevention plans, codes of practice, etc. The paint industry is fully engaged in that process and most paint products on the shelf, now used by consumers for decorative purposes are water based with very low or no VOC content. Getting left-over paint back for recycling and reuse further ensures less impact on the environment and human health and the paint industry has proven its commitment to recycling and leads the world in post consumer paint recycling.

There were other matters raised in the Ministerial Directive that will be addressed by industry and those seeking to have a strong program operator for paint and coatings, as follows:

1. "There were concerns raised by a range of stakeholders": As noted herein, and in other fora, it is clear that there was extensive consultations done by all parties over the past year and a half referencing specific issues in the directive. It is not clear who those stakeholders are or what their concerns are at this time. In the fullness of time we believe that WDO will be able to revisit those concerns and ensure they are fully addressed. The transition work done by Product Care - in conjunction with

Stewardship Ontario - included a specific transition plan and 'agreement in principle' to ensure there was no fragmentation or stranded costs as a result of a new program operator being approved. WDO fully concurred that this had indeed been fully addressed in a new, robust transition plan insisted on by WDO.

2. "Collaborative approach by working with interested stakeholders and consider differing opinions": Many have questioned the extent of the consultations to date given the fact that the ISP application was supposed to be addressed over a three month period, but instead the evaluation process was extended an additional six months to allow for wider consultation. It is difficult to see what outstanding issues have not been addressed. While addressing the views of the many stakeholders over the past year the view of "Producers" must also be fully considered. In this case their view is clear: they wish to move on with respect to establishing a new program operator, which is their right under the WDA, but requires the approval of Waste Diversion Ontario per the ISP Guidelines. The ISP, in fact, is more in line with 'individual' producer responsibility than even extended producer responsibility (EPR), now provided under a multi-material waste manage-

ment approach under Stewardship Ontario. Before a new program operator is approved it must meet the threshold of being 'as good or better' than the current program plan. This is indeed the case with Product Care under the proposed paint ISP. It should be noted that the 'producers' are the ones being regulated, ensuring the program is run well and that it achieves positive recycling outcomes. The goal of waste diversion is just that, to get more waste diversion in a system that is the responsibility of the producers. Any additional benefits that flow from a well-managed program - beyond more waste diversion - is clearly an added benefit and could include such things as increased waste management jobs, more waste recovery, less pollution, less waste in landfill and better environmental and human health.

3. "If the legislation is passed, it is imperative that we carefully consider any changes in how we manage existing waste diversion programs".

Of course, this is a requirement under the Act per the ISP Guidelines and something that WDO was most concerned about achieving throughout. The agreement in principle with Stewardship Ontario on an effective transition plan assured that this would be the case.

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Despite this undertaking industry per the ISP, it must be noted that under the WDA, as it is currently structured, each material category is responsible for paying the full program cost for its waste. Other material categories are not permitted to subsidize or cross-subsidize waste diversion of other streams. In fact, there is a specific part of the transition plan addressing this issue whereby Product Care would ensure that the current program operator, Stewardship Ontario, can effectively address the 10 percent of remaining stewards who have not yet indicated that it will join the new ISP. It is not a requirement under the Act, but nevertheless WDO required that this be done in to ensure no fragmentation.

4. "In accordance with 5 (h) and (i) of the WDA public consultations be done on how ISPs would operate": As noted above the dozens of consultations conducted with multiple stakeholders suggests that further consultations would only cover the same ground already addressed. The fact that 90 percent of the producers wish to move forward with an ISP should count for something. There will always be concerns expressed by a small minority of stakeholders with respect to change for various reasons, which are not always related to the ultimate goal of the legislation, waste diversion.

5. "Affect the ongoing success and financial viability of the existing waste diversion programs, including impacts from the fragmentation of the programs": Preventing negative impacts from fragmentation was the rationale for WDO's insistence on a comprehensive transition plan, added to the ISP guidelines after the fact and with extensive consultations. Moreover, Product Care provided a process to ensure that no stewards would be left without service per the products in the paint supply chain, which also includes pesticides, solvents and fertilizers. In fact, Product Care was about to submit an ISP for Pesticides, Solvent and Fertilizers (three of the nine products in the MHSW program) representing approximately 10 percent of the costs of the paint stewards, or \$2 million in total annual costs. That ISP application was withdrawn. Under the current transition plan for the paint ISP, Product Care would still provide services to Stewardship Ontario to ensure those materials (pesticides, solvents and fertilizers) are not fragmented and continue to have a strong program operator handling waste diversion. Nevertheless, the paint industry cannot be held responsible for the way in which other material categories are managed by the current program operator and have the right to establish an ISP as granted under the Waste Diversion Act.

Gary LeRoux is the president of the Canadian Paint and Coatings Association.



AAC in Pittsburgh



The Annual Anodizing Conference & Exposition will take place September 16-18, 2014 at Pittsburgh Marriott City Center, Pittsburgh, Pennsylvania, USA

It features:

- Technical Sessions
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- Anodizing Expo
- Networking
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This three-day comprehensive event offers education and networking geared specifically to the anodizing community. Your paid registration includes entry to the Anodizing Conference General Sessions, Focus Sessions, Anodizing Expo, and networking events.

Value-added options, which require an additional fee and registration, include a plant tour, the Anodizing Essentials (Level 1) Workshop, and the Anodizing Quality Workshop (Level 2) in the AAC School for Anodizers.

AAC developed the School for Anodizers as an educational program for industry professionals to improve their operations and level of expertise. The following courses are offered as additional educational options during the 2014 Anodizing Conference. Additional fee and registration are required. Further program details can be found online at www.AACconf.org.

ANODIZING ESSENTIALS WORKSHOP – LEVEL 1 MONDAY, SEPTEMBER 15, 2014 • 8:00 A.M. - 5:00 P.M.

This one-day program for anodizers teaches the fundamentals and the foundation of quality anodizing and explains how to anodize aluminum properly. The workshop was developed by anodizing professionals for anodizing professionals.

With an emphasis on quality, the program takes the learner through the entire process – beginning with the metallurgical properties of aluminum alloys commonly anodized right through to the final rinse and sealing processes. This course is ideal for those who may be new to working the anodizing line, as well as those who oversee the process or who may simply want a refresher – a reminder of best practices.

Registration for this course includes breakfast, lunch, welcome reception, and course materials. For more information, including complete schedule, session topics, and descriptions, visit www.AACconf.org.

ANODIZING QUALITY WORKSHOP – LEVEL 2 TUESDAY, SEPTEMBER 16, 2014 • 6:15 A.M. - 1:15 P.M.

The Level 2 Workshop will be held at the Alcoa Technical Center. Therefore, you must be in the hotel lobby at 6:15 a.m. to board the bus to the Workshop. The Workshop will begin at 7:30 a.m. and includes breakfast and lunch at Alcoa.

This advanced class moves beyond the anodizing basics to address quality and process issues commonly faced by anodizers. The first half of the workshop explains manufacturing processes and metal finishing, followed by how to re that may manifest through the processes discussed. The second half of the workshop offers a series of interactive "Troubleshooting Stations" where process experts will host small groups to discuss various individual problems, building on the principles presented in the first half of the workshop.

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The Powder Coating Institute's (PCI) upcoming Powder Coating Show will focus solely on an environmentally friendly coating technology that has steadily grown in production and consumption over the last five years.

"In North America alone, thermoset powder coatings production increased from 450 million pounds in 2009 to 562 million pounds produced in 2013," reported Dave Lurie, PCI Executive Director. "We can expect another 4-5 per cent increase in powder coating production over the course of this year," he added. World-wide production of powder coating totals about 3.4 billion pounds. Although consumption in North America is only about 22 per cent, PCI projects this number will increase over the next few years.

Powder coating is a dry finishing process that has become extremely popular since its introduction in North America over 40 years ago. Representing over 15 per cent of the total industrial finishing market, powder is used on a wide array of products. More and more companies specify powder coatings for a high-quality, durable finish, allowing for maximized production, improved efficiencies, and simplified environmental compliance. Used as functional (protective) and decorative finishes, powder coatings are available in an almost limitless range of colors and textures, and technological advancements have resulted in excellent performance properties.

PCI encourages manufacturers and custom coaters interested in building their powder coating operations to attend the 2014 Powder Coating Show. Attendees will discover all the benefits of powder coating through numerous technical sessions, exhibits and industry networking functions.

The 2014 Powder Coating Show is the ONLY tradeshow solely dedicated to the Powder Coating Industry in North America. Proudly recognized as the leading resource for technical and applied technology forums as well as new product innovations and developments, it is the single best opportunity to meet and interact with leading professionals in the powder coating industry. Composed of more than 44 hours of technical training and 100 exhibits, the show will be held September 16-18, 2014, at the Indianapolis Convention Center in Indianapolis, IN, and is open to anyone currently using powder coating technology as well as those simply interested in learning about its benefits.

For complete conference details, please visit: www.powdercoatingshow.com.



Flame Retardant Basics



There are flame retardant, heat resistant, and specialty coatings formulated to meet precise codes and specifications for certain industries. Designed to meeting building and fire codes, protect flammable and non-flammable materials from the effects of fire.

Heat resistant coatings are formulated to provide durable decorative finishes on surfaces that reach temperatures up to 1500 degrees F and a wide selection of colours. They are formulated to provide tough, durable, heat resistant finishes to protect all types of metal surfaces from corrosion and weathering. Professional building and fire inspectors will know that they reduce the flammability of interior or exterior surfaces to meet building or fire code requirements.

The high performance coatings serve various OEM, Military, Industrial, Commercial and aerospace industries.

Flame retardants are not all the same, and they are not interchangeable when it comes to the fire safety of materials and products. A variety of flame retardants is necessary because the elements in flame retardants react differently with fire. In addition, materials that need to be made fire-resistant are very different in their physical nature and chemical composition, and they behave differently during combustion. As a result, chemical manufacturers have developed different flame-

retardant chemistries to suit different products to render them fire-resistant and allow them to retain their intended functionality and performance standards.

According to the North American Flame Retardant Alliance, flame retar-

dants are a key component in reducing the devastating impact of fires on people, property and the environment. They are added to or treat potentially flammable materials, including textiles and plastics. The term “flame retardant” refers to a function, not a family of chemicals. A variety of different chemicals, with different properties and structures, act as flame retardants and these chemicals are often combined for effectiveness.

Bromine, phosphorus, nitrogen and

chlorine are commonly used in flame retardants. Inorganic compounds are also used in flame retardants, either alone or as part of a flame retardant system in conjunction with bromine, phosphorus or nitrogen. It is important to note that flame retardants are not readily interchangeable. Their areas of application are often specific and substitution can be difficult.

Flame retardants are added to different materials or applied as a treatment to materials (e.g., textiles, plastics) to pre-

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vent fires from starting, limit the spread of fire and minimize fire damage. Some flame retardants work effectively on their own; others act as “synergists” to increase the fire protective benefits of other flame retardants. A variety of flame retardants is necessary because materials that need to be made fire-resistant are very different in their physical nature and chemical composition, so they behave differently during combustion. The elements in flame retardants also react differently with fire. As a result, flame retardants have to be matched appropriately to each type of material. Flame retardants work to stop or delay fire, but, depending on their chemical makeup, they interact at different stages of the fire cycle.

When flame retardants are present in the paint or coating, they can act in three key ways to stop the burning process. They may work to:

- Disrupt the combustion stage of a fire cycle, including avoiding or delaying “flashover,” or the burst of flames that engulfs a room and makes it much more difficult to escape.
- Limit the process of decomposition by physically insulating the available fuel sources from the material source with a fire-resisting “char” layer.
- Dilute the flammable gases and oxygen concentrations in the flame formation zone by emitting water, nitrogen or other inert gases.

Today, flame retardants are used predominantly in four major areas: Elec-

tronics and Electrical Devices, Building and Construction Materials, Furnishings and Transportation (Airplanes, Trains, Automobiles).

Products available include paints, varnishes and mastics.

If the coatings are not properly applied, they can not provide the necessary protection and very often, the coatings are not applied to the required thickness or are substituted with other coatings.

The coating must be applied at the thickness at which it was tested in order to provide the rated fire protection. Refer to the test information shown on the ULC label to determine the amount of coating required. It may not be possible to apply the required thickness in one coat and two or more coats may be necessary to build the required coating thickness.

Establish the total square feet of area to be coated and divide this by the required square feet per gallon (spread rate) as indicated on the test report, to obtain the number of gallons required.

Example 1: The area to be coated is 1200 square ft and the spread rate indicated on the label is two coats at 300 sq. ft. per gallon per coat. Then 1200 divided by 300 = 4 gallons per coat x 2 coats = 8 gallons.

Example 2: Some coatings may not indicate the number of coats, but only the required spread rate, i.e. 100 sq.ft. per gallon - then 1200 square feet divided by 100 = 12 gallons.

Many fire retardant coatings may be



applied by any paint contractor or the property owner, but some coatings may require a licensed applicator.

Fire retardant coatings can be top coated to increase their durability, but top coats must be as designated in the test information on the can label. Note that many conventional coatings, used as top-coats, are inherently flammable or may interfere with the performance of the fire retardant coating. Do not confuse top coats with fire retardant coatings.

Use of a Certificate of Application as attached, signed by the coating supplier and the applicator, will provide the inspector with confirmation that the proper type and amount of coating has been purchased and used on the project. The certificate can be retained as a permanent record for future reference.

Further innovation by the chemical manufacturing industry will be required to keep pace with advancements.

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Calendar of Industry Events 2014

- September 16-18, 2014:** Powder Coating Show, Indiana Convention Center & Lucas Oil Stadium, www.PowderCoatingShow.com
- September 26-27, 2014:** Canada Woodworking East, Olympic Stadium, Montreal, QC. www.mpltd.ca
- October 5-7, 2014:** Canadian Paint and Coatings Association (CPCA) Annual Conference & AGM 2014, Quebec City, QC. www.cdnpaint.com/cpca-conference-2014
- October 8, 2014:** CASF First Golf Tournament, Pier's Heath Golf Course, Milton, ON. info@casf.ca
- November 11-13, 2014:** FABTECH 2014, Georgia World Congress Center, Atlanta, GA, www.fabtechexpo.com
- March 10-11, 2015:** uv.eb WEST 2015, Crowne Plaza Hotel - Redondo Beach, CA, www.radtech.org
- May 5-7, 2015:** Powder Coating Show, Louisville, KY, www.powdercoatingshow.com
- May 18-21 2015:** Eastern Coatings Show, Taj Mahal Hotel and Resort in Atlantic City, NJ.
- June 8-11, 2015:** SUR/FIN 2015, Stephens Convention Center, Rosemont, IL, www.NASFsurfin.com
- November 5-7, 2015:** WMS Woodworking Machinery & Supply Expo, International Centre Toronto ON, www.WoodworkingExpo.ca
- November 9-12, 2015:** FABTECH 2015 McCormack Place, Chicago, IL, www.fabtechexpo.com

Huber Launches Hydral Coat 2

Huber Engineered Materials, a division of J.M. Huber Corporation, is introducing Hydral Coat 2 Ultrafine Alumina Trihydrate (ATH) for use in coil coatings and other high performance coating-related applications.

In coatings applications with low film thicknesses, extenders are not commonly used because they adversely affect the gloss and/or performance properties. Huber conducted an analysis comparing high-gloss white and black coil coatings without extenders versus the same coatings extended with Hydral Coat 2 Ultrafine ATH. The coatings delivered the same performance, including 2,000 Hours of QUV weathering.

In addition to a partial replacement of titanium dioxide (TiO₂), Hydral Coat 2 Ultrafine ATH replaced a portion of resin content. The result is a lower cost per gallon without any adverse impact on aesthetics, flexibility or durability. In the black, high-gloss coil coating formulation, a ladder study ranged from 1.5 per cent PVC to 10 per cent PVC without a loss in jetness or gloss.

Hydral Coat 2 Ultrafine ATH has a relatively low specific gravity, so it is more economical than precipitated barium sulfate on a cost-per-gallon basis, and it has a reduced tendency to settle in low viscosity systems. These are important characteristics in coil coatings applications.

"We're extremely pleased with the results we've seen from Hydral Coat 2, and we've had a very enthusiastic response thus far in our sampling efforts," says Mitch Halpert, Coatings Lead for Huber's Fire Retardant Additives business. "The product's combination of high brightness, small particle size and low density makes it a valuable tool for specialty industrial coating formulators."

hubermaterials@huber.com

Introducing Wireless Access Point for the PosiTector Advanced

DeFelsko is pleased to announce the addition of a Wireless Access Point feature to the PosiTector Advanced body.

Available as a free update for existing users, the PosiTector Access Point feature allows you to directly connect your smart device or WiFi-enabled computer to a PosiTector Advanced body without the need for WiFi network access or a Mobile Hotspot. Ideal for use in the field or whenever a WiFi network is not available or out of range, PosiTector Access Point allows you to communicate directly with your Advanced gage body using a web browser or PosiSoft Mobile App. You can also wirelessly download measurement data to your computer using PosiSoft 3.0 Desktop Software.

www.defelsko.com/AccessPoint

Double-Dipped

MOCAP's line of Round, Flat or Finger-Nub Style Vinyl Grips are also available with a dual-wall (Double-Dipped), whereas the grip can be double-dipped in various materials, colors or hardness durometers (soft, semi-rigid or hard) to fit your thicker wall or unique handle cover application. Double Dip Grips provide maximum comfort and durability and are currently used on a wide variety of hand tools and instruments. Choose from many material options, including our traditional smooth and glossy or textured vinyl materials.

www.mocap.com



DuPont Vertrel Sion Specialty Cleaning Fluid Now Available in Canada

DuPont Fluorochemicals launched Vertrel Sion specialty cleaning fluid for use in Canada. DuPont Vertrel Sion was developed in response to worldwide market demand for safer, non-flammable and more sustainable products for industrial cleaning applications such as vapor degreasing. Today, the product is delivering a highly anticipated solution to more than 13 countries around the world.

DuPont Vertrel Sion is used in degreasing, defluxing, silicone removal and general solvent cleaning. This product has a solvency rating (KB value) greater than 100 and is used where maximum cleaning power is required. Vertrel Sion is ideal for replacing n-Propyl bromide (nPB or 1-bromo-propane), and trichloroethylene (TCE), which have worker safety warnings, as well as an ideal replacement for HCFC-225 which has a regulatory phase-out.

In addition to excellent cleaning performance, Vertrel Sion can help users to minimize their environmental footprint because it is reusable, recyclable, and has a Global Warming Potential (GWP) of less than 15, which is significantly lower than many other solvents. Vertrel Sion can be used in existing equipment, requires no stabilizer maintenance for hassle-free use and its high solvency ensures that it can clean a broad range of soils and contaminants.

www.vertrel.com

PAINTLAB+ Krebs Viscometer

NEW to Rhopoint Instruments is the PAINTLAB+ Krebs Viscometer that offers high accuracy viscosity measurement with advanced functionality.

Conforming to ASTM D562, the PAINTLAB+ Krebs Viscometer uses a rotating paddle at a fixed speed of 200rpm to directly measure the viscosity in Krebs units (KU), centipoise (cP) or grams (g). All three measurement units are shown on the screen simultaneously after test.

High stability motor speed control ensures accuracy and repeatability during each test. Real-time high resolution graphing allows monitoring of changes during measurement providing identification of inconsistencies between samples.

As viscosity of coatings is temperature dependent, it is essential that temperature of the sample is controlled and known at the time of measurement. The Rhopoint Krebs Viscometer is the only instrument that is supplied with built-in calibrated temperature measurement and temperature is recorded before and after the test is run.

Test results in KU, cP and g can be immediately printed on a date and time stamped results label which also gives temperature before and after testing. This gives absolute assurance that product viscosity is correct at the time of testing.

Fully automated operation of the PAINTLAB+ Krebs Viscometer saves time by accurately lowering the paddle into the sample to the correct height for a number of standard container sizes. Once the test has completed the paddle automatically raises to drain off, saving time during cleaning.

Lab-tough glass touch screen can be cleaned with any solvent or scraped with scalpel to 'as new' condition. All aluminium construction, lab-tough nylon fixings and neoprene sample mat mean the entire instrument can be cleaned with strong solvents including MEK/acetone etc.

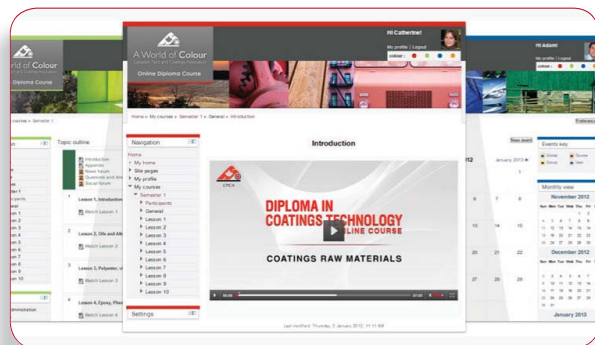
www.rhopointinstruments.com

Register For A Diploma In Coatings Technology



CANADIAN PAINT AND COATINGS ASSOCIATION

ASSOCIATION CANADIENNE DE L'INDUSTRIE DE LA PEINTURE ET DU REVÊTEMENT



Training courses are now **online** and will enable members' staffs and partners to get training as needed. Once the training is completed, successful candidates will receive a Diploma in Coatings Technology. This is an opportunity for members to provide necessary skills training to retain effective staffing levels. The three levels of training available via CPCA are shown at right.

Theoretical Concepts

The course is designed to provide the theoretical basics of coatings technology for young people who are just entering the industry, or who have been working in the industry for some time but who want to upgrade their status in the industry by earning a Diploma in Coatings Technology.

Industrial Paint Applicators

In view of the complexity of most industrial coatings, the course is recommended to industrial paint applicators who need to be able to appreciate the composition, performance capabilities and handling of the products they purchase and use.

Sales and Marketing

Designed for those working in a non-technical role such as purchasing of raw materials, production scheduling or sales or marketing, and who may not be interested in the Diploma as such. These candidates do not need to sit for the examinations and may enroll in only one semester to gain expertise in a subject of particular interest to them.

Learn more about our online courses:

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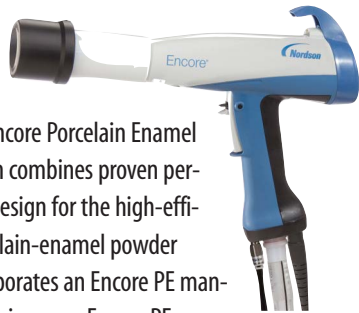
CanPaint.com/training-and-education

New Encore Porcelain Enamel Manual System Provides Excellent Transfer Efficiency in an Easy-to-Use, Plug-in-Play Configuration

Nordson Corporation, a recognized leader in powder coating technologies,

introduces the new Encore Porcelain Enamel (PE) Manual System, which combines proven performance with advanced design for the high-efficiency application of porcelain-enamel powder coatings. The system incorporates an Encore PE manual gun with PowerPurge trigger, an Encore PE pump, an all-digital control unit and optional parts tray into a single unit that is easy-to-use.

"The system is designed for rugged, everyday use," explains Kelly Gregart, product line manager, Nordson Powder Coating Systems. "Incorporating the Encore PE manual spray gun, the system builds upon and enhances the proven industry-leading designs and application performance of their predecessor – Vantage PE guns."



The Encore PE spray gun has the best weight/balance combination available, at less than 711g. The manual gun offers an ergonomic design, making the painter's job easy. In addition, the gun design optimizes the reach into part cavities, and improves maneuverability around and between densely racked parts. The PowerPurge technology is pioneered by Nordson, and is a popular feature among operators.

Other features of the Encore PE manual gun include:

A 100,000 kV voltage multiplier delivers first-pass transfer efficiency, surpassing previous PE generation guns.

Positively retained deflector and locking pattern adjustment sleeve provides consistent, repeatable spray performance.

Electrode air wash keeps the gun charging electrode clean, maximizing electrostatic charging efficiency and preventing surface finish defects.

Specially engineered materials for powder contact parts maximize spray performance and wear life.

Easy disassembly for routine cleaning and maintenance – completely field repairable.

Robust handle, trigger and cable design.

Auxiliary PowerPurge trigger cleans the powder path from the base of the handle through the nozzle, preventing internal powder build-up.

Commonality of parts between the Encore PE auto and manual guns provide consistency when switching operations and minimizes inventory.

As with the Encore PE guns, the Encore PE pump builds upon proven prior-generation technology for porcelain-enamel powder, with improved design for increased operating efficiency. Compared to its predecessor, the Nordson 100 Plus PE pump, the Encore PE pump delivers up to 30 percent more powder at comparable compressed air settings.

The Encore PE Manual System is available in two configurations: a 50-pound fluidized hopper mobile version to provide ease of mobility around the plant or in a rail-mount version for fixed installations. The Encore PE system is plug-and-play, requiring only few connections, such as air and power, for quick, easy set-up and installation.

Nordson Introduces a New Line of Liquid Diaphragm Pumps and Accessories for Low-Pressure Liquid Painting Applications



Nordson Corporation introduces a complete line of liquid diaphragm pumps designed to maximize efficiency, compatibility and economy in many applications. Nordson diaphragm pumps are engineered for low-pressure applications and can handle even the most abrasive or shear-sensitive materials. These self-priming pumps run at variable flow rates controlled by air pressure or fluid back pressure regulation and are available with a variety of accessories.

Nordson liquid diaphragm pumps incorporate design features that provide simple, reliable operation. Their unbalanced air valve design eliminates valve centering and pump stall-out, even under low air inlet pressure. Other benefits include:

- Higher productivity – the combination of maximized flow rates and minimized pulsation and air consumption optimize performance.
 - Highly versatile – multiple porting capabilities allow pump customization to meet specific application needs.
 - Extreme reliability – lube-free air valves provide worry-free operation.
 - Environmentally sound – bolted construction in conjunction with wetted material options provides maximum chemical and leak resistance.
 - Easy serviceability – modular construction, reduced parts count and simple repair kits minimize downtime and costs
- Available in various sizes and flow rates, Nordson diaphragm pumps provide high performance in a complete range of liquid applications – from manual spray guns to full paint kitchens. They are compatible with a variety of coatings, including solvent-based, water-based, UV curable, abrasive materials and plural component materials.

Nordson diaphragm pumps are available with a wide range of accessories, including air line kits, siphon hoses and tubes, wall mount brackets, container covers, agitators, lifts and adapters.

www.nordson.com/powder

Measuring PVD Coating Thickness Using X-Ray Fluorescence



High-precision industrial saws, drills and dies used for the cutting, punching and forming of steel, hard metal or aluminum parts are subject to extreme wear and tear. To increase the service life of these often very expensive tools, they are coated with a hard material coating via a PVD (physical vapor deposition) process. The thickness of the PVD layer determines the durability and therefore the life expectancy of the tool.

As with all types of coatings, the PVD process must also be closely monitored and the thickness of the PVD-deposited layer measured. Alongside standard destructive testing methods, the non-destructive X-ray fluorescence method (XRF) is preferable for this purpose. The FISCHERSCOPE X-RAY XDLM237, with its robust design concept, combines the high-intensity beam of a micro-focus tube with a small aperture and large detector window.

The significant advantages of this device are:

- Non-destructive measurements, without damage to valuable tools
- Fast measurement times
- Smallest measurement spot: 50 μm

The instrument's specialization for this purpose means that layer thickness can be accurately measured on even the finest cutting edges of very high-end tools. Furthermore, using the same instrument, it is possible to determine the base tools' precise metallic composition – e.g. to determine Cobalt leaching when an old coating is chemically removed before a new coating is applied.

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AD INDEX

A.S Patterson	11
Advercom	43
AkzoNobel/Chemcraft	9,21
Alberdingk Boley Inc.	16
Aluminum Anodizing Council	32
American Plating Power	35
Andicor	17
Anest Iwata	30
Bex	26
Buckman	42
CanLak	7
Caps N Plugs	28
Conn	40,43
Chemetall	27
CPCA	10,41
Daemar Inc.	8,33
DeFelsko	15,39
Dempsey	39
Dormer	28
Dynamix	33
ECE	6,24
ECHO Supply	24
Elcometer	25
ElectroPhysik	6
Erie Powder Coating	23
Essentra	13
Eurotech/Sata	29
Exel	24,31
Fabtech	2,3
Finishing Brands	8,14
Fischer	18
Gema	23
Howard Marten	26
Inortech Chimie	44
ICA	30
MOCAP	24
Nadcap Help	34
Prona Tools	20
Quick Blades	43
Servair Filters	31
Stone Tucker	13,37
The Dangers Guys	43
TTX	27
Unimin	38
Univar	5
Valspar	22
Venjakob	31
Yorke Towne	15

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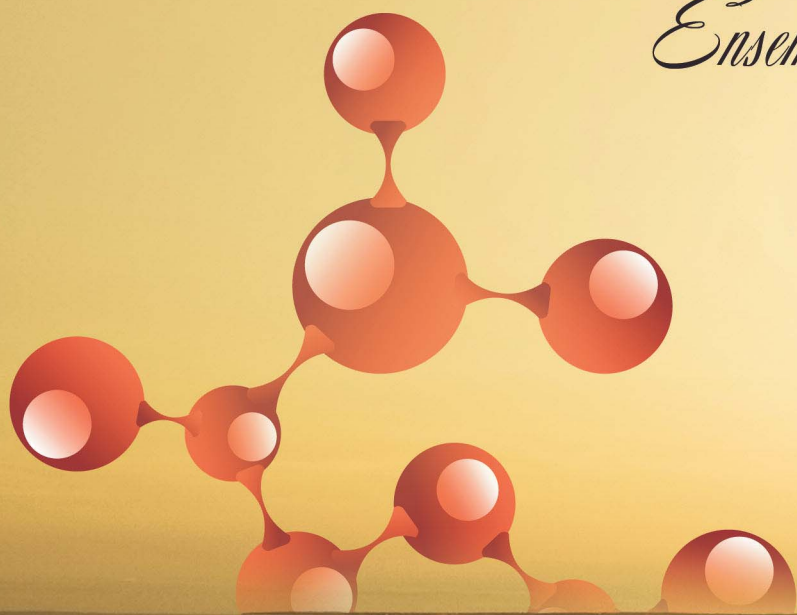


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